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LELAND STANFORD JUNIOR UNIVERSITY

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OFFICE DIRECTORY

The office of the President is room 112.

The office of the Registrar is room 116.

The office of the Secretary to the President is room 113.

The office of the Treasurer is room 250.

The office of the Committee on Public Health is room 95.

The various Departmental offices are given in the Schedule and in the Directory of Officers and Students.

The University Post, Telegraph, and Telephone Office is *Stanford University, California.*

The University Railway Station and Express Office is *Palo Alto, California.*

Requests for *Registers,* blanks, and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to The Registrar, *Stanford University, California.*

[The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. In the Outer Quadrangle forty numbers are allotted to each of the large buildings and ten numbers to each one-story building, beginning with the Assembly Hall and number 120. The engineering buildings south of the Quadrangles begin with number 500. The Chemistry building is on the west avenue between the Quadrangles and the Museum.]

UNIVERSITY CALENDAR

1907

Aug.	22	Thursday	Entrance Examinations begin.
Aug.	27	Tuesday	Registration of Matriculated Students.
Aug.	28	Wednesday	Registration of New Students.
Aug.	29	Thursday	Instruction begins.
Sept.	6	Friday	Conferring of Degrees.
Nov.	28	Thursday	Thanksgiving Recess.
Dec.	1	Sunday	
Dec.	14-20	Saturday-Friday	End Semester Examinations.

1908

Jan.	3-7	Friday-Tuesday	Entrance Examinations.
Jan.	7	Tuesday	Registration for Second Semester.
Jan.	8	Wednesday	Instruction begins.
Jan.	10	Friday	Mid-Year Conferring of Degrees.
Feb.	22	Saturday	Washington's Birthday.
Mar.	9	Monday	Founders' Day.
Mar.	28	Saturday	Mid-Semester Recess.
April	5	Sunday	
May	14	Thursday	Memorial Day.
May	7-13	Thur.-Wed.	End-Semester Examinations.
May	17	Sunday	Baccalaureate Sunday.
May	18	Monday	Class Day.
May	19	Tuesday	Alumni Day.
May	20	Wednesday	Commencement.

Aug.	27	Thursday	Entrance Examinations begin.
Sept.	1	Tuesday	Registration of Matriculated Students.
Sept.	2	Wednesday	Registration of New Students.
Sept.	3	Thursday	Instruction begins.
Sept.	11	Friday	Conferring of Degrees.
Nov.	26	Thursday	Thanksgiving Recess.
Nov.	29	Sunday	
Dec.	12-18	Saturday-Friday	End-Semester Examinations.

1909

Jan.	5	Tuesday	Registration for Second Semester.
Mar.	27	Saturday	Mid-Semester Recess begins.
May	19	Wednesday	Commencement.

PART I

OFFICERS OF THE UNIVERSITY

BOARD OF TRUSTEES

LIFE TRUSTEES	Date of Appointment
HORACE DAVIS	1885
THOMAS BARD McFARLAND	1885
TIMOTHY HOPKINS	1885
GEORGE EDWARD GRAY	1885
JOSEPH DONOHOE GRANT	1891
SAMUEL FRANKLIN LEIB	1891
LEON SLOSS	1891
THOMAS WELTON STANFORD	1893
FRANK MILLER	1893
CHARLES GARDNER LATHROP	1893

ELECTIVE TRUSTEES	Term Expires
*WHITELAW REID	1912
*GEORGE EDWARD CROTHERS	1912
WILLIAM BABCOCK	1915
CHARLES P. EELLS	1915
VANDERLYN STOW	1916

*Appointed by Mrs. Stanford under ten-year term plan.

OFFICERS OF INSTRUCTION AND ADMINISTRATION*

DAVID STARR JORDAN, President of the University.

M. S., Cornell University, 1872; M. D., Indiana Medical College, 1873; Ph. D., Butler University, 1878; LL. D., Cornell University, 1886, Johns Hopkins University, 1902. Instructor in Botany, Cornell University, 1871-72; Professor of Natural History, Lombard University, 1872-73; Principal of Appleton (Wis.) Collegiate Institute, 1873-74; Student and afterward Lecturer in Marine Botany, Anderson School at Penikese, 1874; Teacher of Natural History, Indianapolis High School, 1874-75; Professor of Biology, Butler University, 1902. Instructor in Botany, Cornell University, 1871-72; Professor of Zoology, Indiana University, 1879-85; President of Indiana University, 1885-91; President of the California Academy of Sciences, 1896-98, 1901-03; U. S. Commissioner in charge of Fur Seal Investigations, 1896-98, of Salmon Investigations, 1904.

†JOHN CASPER BRANNER, Vice-President and Professor of Geology.

B. S., Cornell University, 1882; Ph. D., Indiana University, 1885; LL. D., University of Arkansas, 1897. Assistant Geologist, Imperial Geological Survey of Brazil, 1875-78; Special Botanist in South America, 1880-81; Special Agent of the U. S. Department of Agriculture for Investigating Cotton and the Insects affecting it in Brazil, 1882-83; Topographical Geologist of the Geological Survey of Pennsylvania, Anthracite District, 1883-85; Professor of Geology, Indiana University, 1885-91; State Geologist of Arkansas, 1887-92.

OLIVER PEEBLES JENKINS, Professor of Physiology and Histology.

A. B., Moore's Hill College, 1869, A. M., 1872; M. S., Indiana University, 1886, Ph. D., 1889. Professor of Natural Science, Moore's Hill College, 1876-82; Professor of Natural Science, Indiana State Normal School, 1883-86; Professor of Biology, De Pauw University, 1886-91.

MELVILLE BEST ANDERSON, Professor of English Literature.

A. M., Butler University, 1877; LL. D., University of Aberdeen, 1906. Professor of Modern Languages, Butler University, 1877-80; Professor of English Literature, Knox College, 1881-86; Professor of Literature and History, Purdue University, 1886-87; Professor of the English Language and Literature, University of Iowa, 1887-91.

JOHN MAXSON STILLMAN, Professor of Chemistry.

Ph. B., University of California, 1874, Ph. D., 1885. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry, Strassburg and Würzburg, 1875-76; Instructor in Organic and General Chemistry, University of California, 1876-82; Chemist of the Boston and American Sugar Refining Company, 1882-92.

FERNANDO SANFORD, Professor of Physics.

B. S., Carthage College, 1879, M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood (Ill.) High School, 1888-90; Professor of Physical Science, Lake Forest University, 1890-91.

*Arranged in groups in the order of seniority of appointment. For Directory of Officers, see pp. 178-188.

†Absent on leave, 1907-08.

CHARLES DAVID MARX, Professor of Civil Engineering.

B. C. E., Cornell University, 1878; C. E., Karlsruhe Polytechnicum, 1881. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U. S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University, 1884-90; Professor of Civil Engineering, University of Wisconsin, 1890-91.

CHARLES HENRY GILBERT, Professor of Zoology.

B. S., Butler University, 1879; M. S., Indiana University, 1882, Ph. D., 1883; Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-88; Professor of Zoology, Indiana University, 1888-91; Assistant to the U. S. Fish Commission, 1880-91.

DOUGLAS HOUGHTON CAMPBELL, Professor of Botany.

Ph. M., University of Michigan, 1882, Ph. D., 1886. Teacher of Biology, Detroit High School, 1882-86; Student at Bonn, Tubingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91.

‡EWALD FLÜGEL, Professor of English Philology.

Ph. D., University of Leipzig, 1886. Student, Universities of Freiburg and Leipzig, 1882-88; Privat Docent, University of Leipzig, 1888-92.

CHARLES BENJAMIN WING, Professor of Structural Engineering.

C. E., Cornell University, 1886. Fellow in Civil Engineering, Cornell University, 1886-87, Instructor, 1887-90. Assistant Professor, 1890-91; Engineer, Pompton (N. J.) Powder Co., 1887, Phoenix Powder Co., Farmingdale, N. Y., 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889-90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891-92.

FRANK ANGELL, Professor of Psychology.

B. S., University of Vermont, 1878; Ph. D., University of Leipzig, 1891; L. H. D., University of Vermont, 1892. Teacher in Washington (D. C.) High School, 1880-87; Assistant Professor of Psychology, Cornell University, 1891-92.

LEANDER MILLER HOSKINS, Professor of Applied Mathematics.

B. C. E. and B. S., University of Wisconsin, 1883, M. S., 1885, C. E., 1887. Instructor in Engineering, University of Wisconsin, 1885-89, Assistant Professor of Mechanics, 1889-91, Professor of Theoretical and Applied Mechanics, 1891-92.

ROBERT EDGAR ALLARDICE, Professor of Mathematics.

A. M., University of Edinburgh, 1882. Baxter Scholar in Mathematics, University of Edinburgh, 1882-83, Drummond Scholar in Mathematics, 1883-84; Assistant Professor of Mathematics, University of Edinburgh, 1883-92.

‡WILLIAM RUSSELL DUDLEY, Professor of Botany.

B. S., Cornell University, 1874, M. S., 1876. Student, Summer School, Penikese, 1874, Harvard University, 1875, Universities of Strassburg and Berlin, 1887-88; Instructor in Botany, Cornell University, 1872-76, Assistant Professor, 1876-92.

AUGUSTUS TABER MURRAY, Professor of Greek.

A. B., Haverford College, 1885; Ph. D., Johns Hopkins University, 1890. Fellow in Johns Hopkins University, 1887-88; Professor of Greek, Earlham College, 1888-90; Student, Universities of Leipzig and Berlin, 1890-91; Professor of Greek, Colorado College, 1891-92.

‡ Absent on leave, First Semester, 1907-08.

JOHN ERNST MATZKE, Professor of Romanic Languages.

A. B., Hope College, 1882; Ph. D., Johns Hopkins University, 1888. Professor of French, Bowdoin College, 1889-90; Professor of the Romanic Languages, Indiana University, 1890-91; Associate in the Romanic Languages, Johns Hopkins University, 1891-93.

JAMES OWEN GRIFFIN, Professor of German.

Graduate of the Pennsylvania State Normal School, 1873. Teacher in Pennsylvania State Normal School, 1873-74; Principal, Unadilla (N. Y.) Academy, 1874-79; Student, University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.), 1880-85; Instructor in German, Cornell University, 1885-91, Registrar, 1890-91.

RUFUS LOT GREEN, Professor of Mathematics.

B. S., Indiana University, 1885, A. M., 1890. Instructor in Mathematics, Indiana University, 1885-86; Student, Johns Hopkins University, 1886-87; Professor of Pure Mathematics, Indiana University, 1887-93.

†ARLEY BARTHLOW SHOW, Professor of Mediæval History.

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane College, 1892. Pastor Congregational Church, Waco, Neb., 1885-87; Professor of History and English Literature, Doane College, 1887-92; Student, University of Leipzig, 1900-01; Lecturer on History of the Early Church, Pacific Theological Seminary, Oakland, 1905-07.

ORRIN LESLIE ELLIOTT, Registrar.

Ph. B., Cornell University, 1885, Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86, Instructor in English, 1886-91, Assistant Registrar and President's Secretary, 1890-91.

VERNON LYMAN KELLOGG, Professor of Entomology and Lecturer in Bionomics.

B. S., University of Kansas, 1889, M. S., 1892. Student, Cornell University, 1891, University of Leipzig, 1893; Assistant Professor of Entomology, University of Kansas, 1890-93, Associate Professor, 1893-94.

JAMES PERRIN SMITH, Professor of Paleontology.

A. M., Vanderbilt University, 1886; Ph. D., University of Göttingen, 1892. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887-90.

LIONEL REMOND LENOX, Professor of Analytical Chemistry.

Ph. B., Columbia College, 1888. Assistant Chemist, Bethlehem Iron Co., 1887; Instructor in Chemistry, Lehigh University, 1888-91; Chemist, Ordnance Department, U. S. N., Washington (D. C.), 1891-92.

HENRY RUSHTON FAIRCLOUGH, Professor of Latin.

A. B., University of Toronto, 1883, A. M., 1886; Ph. D., Johns Hopkins University, 1896. Fellow in Classics, University College, Toronto, 1883-84; Classical and English Master, Brockville High School, 1884-86; Graduate Scholar, Johns Hopkins University, 1886-87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887-93.

MAX FARRAND, Professor of History.

A. B., Princeton University, 1892, A. M., 1893, Ph. D., 1896. Boudinot Fellow in History, Princeton University, 1892-93, Fellow in Social Science, 1893-94; Student, Universities of Leipzig and Heidelberg, 1894-96; Instructor in History, Wesleyan University, 1896-98, Associate Professor, 1898-99, Professor, 1899-1901.

†Absent on leave, 1907-08.

WILLIAM FREDERICK DURAND, Professor of Mechanical Engineering.

Graduate U. S. Naval Academy, 1880; Ph. D., Lafayette College, 1888. Engineer Corps, U. S. Navy, 1880-87; Special Duty as Assistant Professor of Mechanical Engineering, Lafayette College, 1883-85; Worcester Polytechnic Institute, 1887; Professor of Mechanics and Superintendent of Mechanical Department, Michigan State Agricultural and Mechanical College, 1887-91; Professor of Marine Engineering and Principal Graduate School of Naval Architecture and Marine Engineering, Cornell University, 1891-1904.

HARRIS JOSEPH RYAN, Professor of Electrical Engineering.

M. E., Cornell University, 1887. With Western Engineering Co., Lincoln, Neb., 1887-88; Instructor in Physics, Cornell University, 1888-89, Assistant Professor of Electrical Engineering, 1889-92, Associate Professor, 1892-95, Professor, 1895-1905; Judge, Board of Awards, World's Fair, Chicago, 1893; U. S. Government Delegate, International Electrical Congress, St. Louis Exposition, 1904.

GEORGE HEMPL, Professor of Germanic Philology.

A. B., University of Michigan, 1879; Ph. D., University of Jena, 1889; LL. D., University of Wisconsin, 1904. Principal, Saginaw (Mich.) H. S., 1879-82, La Porte (Ind.) H. S., 1882-84; Instructor in German, Johns Hopkins University, 1884-86; Student, Universities of Gottingen, Tubingen, Strassburg, Jena, and Berlin, 1886-89; Assistant Professor of English, University of Michigan, 1889-93, Junior Professor, 1893-97, Professor of English Philology and General Linguistics, 1897-1906; Professor of English, University of Chicago, Summer Quarter, 1897; President of the American Dialect Society, 1900-05; President of the Modern Language Association, 1902-03; President of the American Philological Association, 1903-04; Chairman of the Department of History of Language, Congress of Arts and Sciences, St. Louis, 1904.

‡EPHRAIM DOUGLASS ADAMS, Professor of History.

A. B., University of Michigan, 1887, Ph. D., 1890. Principal of High School, McGregor (Ia.), 1887; Principal of High School, Saginaw (Mich.), 1889; Special Agent in Charge of Street Railways, Eleventh Census, Washington (D. C.), 1890; Assistant Professor and afterward Professor of European History, University of Kansas, 1891-1902.

EDWARD CURTIS FRANKLIN, Professor of Organic Chemistry.

B. S., University of Kansas, 1888, M. S., 1890; Ph. D., Johns Hopkins University, 1894. Chemist to the Palo Alto Plantation and Sugar Factory, Donaldsville (Ga.), 1888; Chemist to the Belle Vista Mining and Milling Co., Los Quemados, Costa Rica, 1897; Instructor in Chemistry, University of Kansas, 1888-90; Student at Berlin, 1890-91; Assistant in Chemistry, University of Kansas, 1891-93; Associate Professor, 1894-99, Professor of Physical Chemistry, 1899-1903.

ELLWOOD P. CUBBERLEY, Professor of Education.

A. B., Indiana University, 1891; A. M., Columbia University, 1902, Ph. D., 1905. Instructor in Science, Ridgeville College (Ind.), 1891; Professor of Physical Science, Vincennes University (Ind.), 1891-93, President, 1893-96; Superintendent of City Schools, San Diego (Cal.), 1896-98.

ALPHONSO GERALD NEWCOMER, Professor of English.

A. B., University of Michigan, 1887; A. M., Cornell University, 1888. Fellow in Classics, Cornell University, 1887-88; Principal, Mt. Morris (Ill.) H. S., 1888-89; Instructor in Latin and French, Knox College, 1889-91.

‡ Absent on leave, First Semester, 1907-08.

CHARLES HENRY HUBERICH, Professor of Law.

LL. B., University of Texas, 1897, LL. M., 1898; D. C. L., Yale University, 1899; J. U. D., University of Heidelberg, 1905; LL. D., University of Melbourne, 1907. Student, Universities of Berlin and Heidelberg, 1899-1900; Instructor in Political Science and Law, University of Texas, 1900-03, Adjunct Professor, 1903-05; Professor of Law, University of Chicago, Summer Session, 1907.

STEWART WOODFORD YOUNG, Professor of Physical Chemistry.

B. S., Cornell University, 1890. Assistant in Chemistry, Cornell University, 1890-91; Instructor in Chemistry, Swarthmore College, 1891-93.

FREDERIC CAMPBELL WOODWARD, Professor of Law.

LL. B., Cornell University, 1894, LL. M., 1895; A. M., Dickinson College, 1902. Attorney at Law, practicing in New York City, 1895-98; Professor of Law, Dickinson College, 1898-1902; Professor of Law, Northwestern University, 1902-07.

†JOHN CHARLES LOUNSBURY FISH, Professor of Railroad Engineering.

C. E., Cornell University, 1892. Instructor in Civil Engineering, Cornell University, 1892-93; Division Engineer, L. S. & M. S. Railway, 1906-07.

ARTHUR BRIDGMAN CLARK, Associate Professor of Drawing.

B. Ar., Syracuse University, 1888, M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira (N. Y.), 1888-89; Instructor in Architecture, Syracuse University, 1889-92.

FRANK MACE McFARLAND, Associate Professor of Histology.

Ph. B., De Pauw University, 1889; A. M., Leland Stanford Jr. University, 1893; Ph. D., University of Würzburg, 1896. Assistant in Biology, De Pauw University, 1888-89; Professor of Biology, Olivet College, 1889-92; Student, Würzburg, Zürich, and Naples, 1894-96.

GEORGE CLINTON PRICE, Associate Professor of Zoology.

B. S., De Pauw University, 1890; Ph. D., Leland Stanford Jr. University, 1897. Student in Biology, Johns Hopkins University, 1890-92, University of Munich, 1895-96.

GUIDO HUGO MARX, Associate Professor of Mechanical Engineering.

M. E., Cornell University, 1893. With Gleason Tool Co., Rochester (N. Y.), 1893-94; with Bement Miles & Co., Philadelphia, 1894-95.

CLYDE AUGUSTUS DUNIWAY, Associate Professor of History.

A. B., Cornell University, 1892; A. M., Harvard University, 1894, Ph. D., 1897. Instructor in History, Harvard University and Radcliffe College, 1896-97.

GEORGE ARCHIBALD CLARK, Secretary to the President.

B. L., University of Minnesota, 1891. Secretary, U. S. Fur Seal Commission, 1896-98.

GEORGE JAMES PEIRCE, Associate Professor of Botany and Plant Physiology.

B. S., Harvard University, 1890; Ph. D., University of Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890-92; Parker Fellow in Harvard University, studying in Bonn, Leipzig, and Munich, 1892-94; Assistant Professor of Botany, Indiana University, 1895-97.

†Absent on leave, 1907-08.

*HERMAN DE CLERCQ STEARNS, Associate Professor of Physics.

A. B., Leland Stanford Jr. University, 1892; A. M., 1893. Student, University of Berlin, 1897-98.

OLIVER MARTIN JOHNSTON, Associate Professor of Romanic Languages.

A. B., Mississippi College, 1890, A. M., 1892; Ph. D., Johns Hopkins University, 1896. Principal, Preparatory Department, Mississippi College, 1890-91. Professor of English, 1891-93; Fellow in Johns Hopkins University, 1895-96; Lecturer in French Philology, Byrn Mawr College, 1896-97.

MELVIN GILBERT DODGE, Associate Librarian.

A. B., Hamilton College, 1890, A. M., 1894. Librarian, Hamilton College, 1892-1901.

JOHN FLESHER NEWSOM, Associate Professor of Mining.

A. B., Indiana University, 1891; A. M., Leland Stanford Jr. University, 1893, Ph. D., 1901. Assistant, Arkansas Geological Survey, 1891-95; Instructor in Geology, Indiana University, 1894-96, Assistant Professor, 1896-98.

†HENRY WINCHESTER ROLFE, Associate Professor of Greek.

A. B., Amherst College, 1880, A. M., 1885. Student, University of Leipzig, 1881-83; Instructor in English, Cornell University, 1883-85; Professor of Latin, Swarthmore College, 1885-90; Lecturer on Latin Literature to Post-graduate Students, University of Pennsylvania, 1891-92; University Extension Lecturer, 1891-1900.

DAVID CHARLES GARDNER, Chaplain.

Graduate, Church Divinity School of the Pacific, San Mateo, 1897. Curate, St. James Mission, San Francisco, 1898; Rector of All Saints Church, Palo Alto, 1898-1902.

HAROLD HEATH, Associate Professor of Zoology.

A. B., Ohio Wesleyan University, 1893; Ph. D., University of Pennsylvania, 1898. Assistant in Biology, Ohio Wesleyan University, 1891-93; Professor of Biology, University of the Pacific, 1893-94; Harrison Fellow in Zoology, University of Pennsylvania, 1896-98.

WILLIAM FREEMAN SNOW, Associate Professor of Hygiene.

A. B., Leland Stanford Jr. University, 1896, A. M., 1897; M. D., Cooper Medical College, 1900. Student, Johns Hopkins Medical School, 1901-02.

HANS FREDERIK BLICHFELDT, Associate Professor of Mathematics.

A. B., Leland Stanford Jr. University, 1896; Ph. D., University of Leipzig, 1898.

ALLYN ABBOTT YOUNG, Associate Professor of Economics.

Ph. B., Hiram College, 1894; Ph. D., University of Wisconsin, 1902. Student Clerk, United States Census, 1899-1900; University Fellow in Economics, University of Wisconsin, 1900-01, Instructor, 1901-02; Instructor in Economics, Western Reserve University, 1902-04, Associate Professor, 1904; Assistant Professor of Finance, Dartmouth College, 1904-05; Assistant Professor of Economics, University of Wisconsin, 1905-06.

*Died October 21, 1907.
†Absent on leave, 1907-08.

THORSTEIN B. VEBLEN, Associate Professor of Economics.

A. B., Carleton College, 1880; Ph. D., Yale University, 1884. Graduate Student, Johns Hopkins University; Fellow in Economics and Finance, Cornell University, 1891-92; Fellow in Political Economy, University of Chicago, 1892-93, Reader, 1893-94, Associate, 1894-96, Instructor, 1896-1900, Assistant Professor, 1900-06.

ALBERT CONSER WHITAKER, Associate Professor of Economics.

A. B., Leland Stanford Jr. University, 1899; Ph. D., Columbia University, 1904. Scholar in Economics, Columbia University, 1899-1900, Fellow, 1900-01; Student, University of Berlin, 1901-02; Lecturer in Economics and Social Science, Columbia University, 1906-07.

ARTHUR MARTIN CATHCART, Associate Professor of Law.

A. B., Leland Stanford Jr. University, 1896. Student, Harvard University, 1896-97; Registered Office Clerk with Attorneys of Colorado Supreme Court, 1900-02; Attorney at Law, Colorado Springs (Colo.), 1903-04.

ROBERT ECKLES SWAIN, Associate Professor of Chemistry.

A. B., Leland Stanford Jr. University, 1899; M. S., Yale University, 1901, Ph. D., 1904.

GEORGE THOMAS CLARK, Librarian.

B. S., University of California, 1886. Assistant Librarian, University of California, 1886-87; Deputy State Librarian, California State Library, 1887-90, Classifier, 1890-94; Librarian, San Francisco Public Library, 1894-1907.

WESLEY NEWCOMB HOHFELD, Associate Professor of Law.

A. B., University of California, 1901; LL. B., Harvard University, 1904. Attorney at Law, San Francisco, 1904-05; Instructor, Hastings College of Law, University of California, 1905; Assistant Professor, Department of Law, University of California, Summer Session, 1907; Associate Professor of Law, University of Chicago, Summer Quarter, 1908.

HENRY WALDGRAVE STUART, Associate Professor of Philosophy.

Ph. B., University of California, 1893; Ph. D., University of Chicago, 1900. Teacher, Hollister (Cal.) H. S., 1893-94; Fellow in Political Economy, University of Chicago, 1894-96; Instructor (pro tem) in Economics and Psychology, Washington University, St. Louis, 1896-97; Teacher, Central School, Oakland (Cal.), 1897-98; Principal, Woodland (Cal.) H. S., 1898-99; Fellow in Philosophy, University of Chicago, 1899-1900; Instructor in Economics and History, Ripon College, 1900-01; Instructor in Philosophy, State University of Iowa, 1901-04; Assistant Professor of Philosophy, Lake Forest College, 1904-06, Acting Professor, 1906-07.

†KARL G. RENDTORFF, Assistant Professor of German.

A. M., Leland Stanford Jr. University, 1894, Ph. D., 1896. Student, University of Giessen, 1884-85, University of Kiel, 1885-91.

FREDERICK JOHN ROGERS, Assistant Professor of Physics.

M. S., Cornell University, 1891. Instructor in Physics, Cornell University, 1892-1900.

LILLIEN JANE MARTIN, Assistant Professor of Psychology.

A. B., Vassar College, 1880. Teacher of Science, Indianapolis High School, 1880-89; Vice-Principal and Head of Department of Science, Girls' High School, San Francisco, 1889-94; Student, University of Göttingen, 1894-98.

†COLBERT SEARLES, Assistant Professor of Romanic Languages.

A. B., Wesleyan University, 1895; Ph. D., University of Leipzig, 1899. Instructor in French and Italian, Indiana University, 1899-1900; Associate Professor of English and Modern Languages, University of Arkansas, 1900-01.

†Absent on leave, 1907-08.

‡RAYMOND MACDONALD ALDEN, Assistant Professor of English Literature and Rhetoric.

A. B., University of Pennsylvania, 1894; A. M., Harvard University, 1896; Ph. D., University of Pennsylvania, 1898. Instructor in English, Columbian University, Washington (D. C.), 1894-95; Assistant in English, Harvard University, 1896-97; Senior Fellow in English, University of Pennsylvania, 1898-99, Instructor, 1899-1901.

WILLIAM ALPHA COOPER, Assistant Professor of German.

A. B., Marietta College, 1892, A. M., 1897. Student, Universities of Bonn, Leipzig, and Paris, 1892-94; Instructor in German and French, Marietta College, 1895-99, Professor, 1899-1901.

JEFFERSON ELMORE, Assistant Professor of Latin.

A. B., Leland Stanford Jr. University, 1895, A. M., 1895, Ph. D., 1901. Principal of Merced County High School, 1895-97; Student, Universities of Bonn and Berlin, 1901-02.

JOHN OTTERBEIN SNYDER, Assistant Professor of Zoology.

A. B., Leland Stanford Jr. University, 1897, A. M., 1899.

HARRY ALVIN MILLIS, Assistant Professor of Economics.

A. B., Indiana University, 1895, A. M., 1896; Ph. D., University of Chicago, 1899. Reference Librarian, John Crerar Library, Chicago, 1899-1902; Professor of Economics and Sociology, University of Arkansas, 1902-03.

JAMES ROLLIN SLONAKER, Assistant Professor of Physiology.

B. S., University of Wisconsin, 1893; Ph. D., Clark University, 1896. Fellow in Biology, Clark University, 1893-96; United States Fish Commission, Woods Holl (Mass.), summer, 1895; Instructor in Zoology, Indiana University, 1896-99, Indiana University Biological Station, 1896-1900; Assistant Professor of Zoology, Indiana University, 1899-1901; Research Assistant in Neurology, University of Chicago, 1901-02, Associate in Neurology, 1902-03.

WILLIAM RANKINE ECKART, Assistant Professor of Mechanical Engineering.

M. E., Cornell University, 1895. Mechanical Engineer, Siemens Halske Electric Co., Chicago, 1895-96; Construction Engineer, Allison Branch Mine, Grass Valley (Cal.), 1896-98; Testing Work for Fraser & Chalmers, in Hawaii and Mexico, 1898-99; with W. R. Eckart, Consulting Engineer, Hydraulic Power Plants and Mining Work, 1899-1903; Consulting Engineer, Geary St. P. & O. R. R., San Francisco, 1902-04.

†HALCOTT CADWALADER MORENO, Assistant Professor of Applied Mathematics.

A. B., University of Georgia, 1893, A. M., 1894, B. L., 1896; Ph. D., Clark University, 1900. Tutor in Mathematics, University of Georgia, 1893-97; Scholar and Fellow in Mathematics, Clark University, 1897-1900; Assistant in Mathematics, Clark University, 1900-01.

CLARA S. STOLTENBERG, Assistant Professor of Physiology.

A. B., Leland Stanford Jr. University, 1896, A. M., 1897.

SAMUEL SWAYZE SEWARD, Jr., Assistant Professor of English.

A. B., Columbia College, 1896; A. M., Columbia University, 1897. Scholar in Literature, Columbia University, 1896-97, Assistant in Literature, 1897-99; Student, Oxford University, 1899-1900.

‡ Absent on leave, Second Semester, 1907-08.
†Absent on leave, 1907-08.

BENJAMIN OLIVER FOSTER, Assistant Professor of Latin.

A. B., Leland Stanford Jr. University, 1895; A. M., Harvard University, 1897, Ph. D., 1899. Parker Fellow of Harvard University, studying in the American School of Classical Studies in Rome, 1899-1900; Acting Professor of Latin and Greek, State Normal College of Michigan, 1900-01.

‡DORSEY ALFRED LYON, Assistant Professor of Metallurgy.

A. B., Leland Stanford Jr. University, 1898; A. M., Harvard University, 1902. Assistant in Chemistry, Leland Stanford Jr. University, 1897-98; Instructor in Geology, University of Washington, 1898-99, Assistant Professor of Mining and Metallurgy, 1899-1900; Professor of Mining and Metallurgy and Dean of the School of Mines, 1900-01; Graduate Student, Harvard University, 1901-02; with United States Smelting Co. (Utah), 1902.

HENRY LEWIN CANNON, Assistant Professor of History.

A. B., Western Reserve University, 1893; Ph. D., University of Pennsylvania, 1898. Student, Harvard University, 1893-94, Yale University, 1896-97; Fellow in European History, University of Pennsylvania, 1897-98; Instructor in History, University of Cincinnati, 1900-03.

HOWARD JUDSON HALL, Assistant Professor of English.

B. S., Michigan State Agricultural College, 1890; A. B., Leland Stanford Jr. University, 1896; A. M., Harvard University, 1900. Professor of English and Librarian, University of Arizona, 1891-1904.

AUSTIN FLINT ROGERS, Assistant Professor of Mineralogy and Petrography.

A. B., University of Kansas, 1899, A. M., 1900; Ph. D., Columbia University, 1902. Assistant in Mineralogy, University of Kansas, 1898-1900; Assistant Geologist, University Geological Survey of Kansas, 1898-1900, 1903; Fellow in Mineralogy, Columbia University, 1900-02, Tutor in Mineralogy, 1902-05.

MACY MILLMORE SKINNER, Assistant Professor of German.

A. B., Harvard University, 1894, A. M., 1895, Ph. D., 1897. Harvard Fellow, University of Strassburg, 1897-98, University of Berlin, 1898-99; Instructor in German, Harvard University, 1899-1905.

ELMER REGINALD DREW, Assistant Professor of Physics.

B. S., University of California, 1888; Ph. D., Cornell University, 1903. Student, University of Chicago, 1897-98, University of Berlin, 1903-05; Assistant in Physics, University of California, 1889-92, Instructor, 1892-1902.

†LEE EMERSON BASSETT, Assistant Professor of Elocution.

A. B., Leland Stanford Jr. University, 1901. Graduate Cumnock School of Oratory, Los Angeles, 1898; Instructor in Public Speaking, University of Southern California, 1898-99; Instructor in Elocution, Long Beach (Cal.), summer school, 1898; Student, School of Expression, Boston, 1901.

†HENRY SUZZALLO, Assistant Professor of Education.

A. B., Leland Stanford Jr. University, 1899; A. M., Columbia University, 1902, Ph. D., 1905. Principal, Rural School, Alviso (Cal.), 1896-97; Principal, Elementary School, Alameda (Cal.), 1899-1901; Graduate Scholar, Teachers' College, 1901-02, Fellow, 1903-04; Instructor, San Francisco State Normal School, 1902-03; Deputy Superintendent of City Schools, San Francisco, 1903-04; Lecturer in Education, Teachers' College, Columbia University, 1904-05, Adjunct Professor, 1907-08.

*ANSTRUTHER ABERCROMBIE LAWSON, Assistant Professor of Botany.

B. S., University of California, 1897, M. S., 1898; Ph. D., University of Chicago, 1901. Fellow in Botany, University of Chicago, 1900-01.

‡ Absent on leave, Second Semester, 1907-08.
†Absent on leave, 1907-08.
*Resigned December, 1907.

ERNEST WHITNEY MARTIN, Assistant Professor of Latin.

A. B., University of Chicago, 1900; A. M., Leland Stanford Jr. University, 1902. Instructor in Latin and Greek, Private School, Clarinda (Ia.), 1895-96; Principal of High School, 1896-98; Student, University of Berlin, and American School of Classical Studies, Rome, 1900-01.

HENRY DAVID GRAY, Assistant Professor of English.

Ph. B., Colgate University, 1897; A. M., Columbia University, 1898, Ph. D., 1904. Assistant in German and French, Colgate Academy, 1896-97; University Scholar, Columbia University, 1898-1900; Instructor in Dramatic Literature, American Academy of Dramatic Arts, 1900-02; Instructor in English, University of Texas, 1902-05; Lecturer in English, Columbia University, Summer Session, 1905.

WILLIAM DINSMORE BRIGGS, Assistant Professor of English.

A. B., Leland Stanford Jr. University, 1896; A. M., Harvard University, 1899, Ph. D., 1900. Student, Johns Hopkins University, 1896-97; Instructor in English and German, University of Vermont, 1900-01; Instructor in English, Western Reserve University, 1901-06.

LE ROY ABRAMS, Assistant Professor of Botany.

A. B., Leland Stanford Jr. University, 1899, A. M., 1902. Acting Professor of Botany, University of Idaho, 1899-1900; Assistant in Botany, Leland Stanford Jr. University, 1900-02, Instructor, 1902-04; Fellow in Botany, Columbia University, 1904-05; Assistant Curator, Division of Plants, United States National Museum, 1905-06.

SIDNEY DEAN TOWNLEY, Assistant Professor of Applied Mathematics.

B. S., University of Wisconsin, 1890, M. S., 1892; D. Sc., University of Michigan, 1897. Fellow in Astronomy, University of Wisconsin, 1890-91, Assistant in Astronomy and Mathematics, 1891-92; Hearst Fellow in Astronomy, University of California (Lick Observatory), 1892-93; Instructor in Astronomy, University of Michigan, 1893-95, 1896-98; Student, Universities of Berlin and Munich, 1895-96; Instructor in Practical Astronomy, University of California, 1898-1903, Lecturer in Astronomy, 1904-07; Astronomer in Charge of International Latitude Observatory, 1903-07.

JAMES MARVIN MOTLEY, Assistant Professor of Political Science.

A. B., William Jewell College, 1901, A. M., 1904; Ph. D., Johns Hopkins University, 1906. Fellow in Economics, Johns Hopkins University, 1904, Instructor, 1906; Acting Secretary, Baltimore Federated Charities, 1905; Professor of Economics and Sociology, Wells College, 1906-07.

JOHN EZRA McDOWELL, Assistant Registrar.

A. B., Leland Stanford Jr. University, 1900.

CLIFFORD GILMORE ALLEN, Assistant Professor of Romanic Languages.

A. B., Boston University, 1900; A. M., Leland Stanford Jr. University, 1903; Docteur de l'Université de Paris, 1906. Student, University of Paris, 1903-04; Fellow of Boston University and Student of Universities of Paris and Madrid, 1904-05.

WILLIAM ALBERT MANNING, Assistant Professor of Mathematics.

A. B., Willamette University, 1900; A. M., Leland Stanford Jr. University, 1902, Ph. D., 1904.

JOSEPH GRANT BROWN, Assistant Professor of Physics.

A. B., Leland Stanford Jr. University, 1901, A. M., 1903.

ALBERT LEON GUÉRARD, Assistant Professor of French.

Agrégé de l'Université de Paris, 1906. Instructor in the Romanic Languages, Williams College, 1906-07.

CHARLES ANDREWS HUSTON, Assistant Professor of Law.

A. B., University of Chicago, 1902, J. D., 1907. Fellow in Political Economy, University of Chicago, 1902-03, Assistant in Rhetoric, 1903-04, Associate in Rhetoric, 1904-06.

‡EVELYN WIGHT ALLAN, Dean of Women.

B. S., St. Lawrence University, 1891; A. B., Leland Stanford Jr. University, 1896. Teacher in Montclair (N. J.) High School, 1892-95; Teacher of English, Jersey City High School, 1897-99; Graduate Student at Columbia University, 1907; Teacher of English, Manual Training High School, Brooklyn (N. Y.), 1899-1908.

EDWIN CHAPIN STARKS, Assistant Professor of Zoology.

Assistant in United States Bureau of Biological Survey, 1897-99; Curator of the Museum, University of Washington, 1899-1900.

SAMUEL BARCLAY CHARTERS, JR., Assistant Professor of Electrical Engineering.

M. E., Cornell University, 1904. Delegate International Electrical Congress, St. Louis Exposition, 1904; with Westinghouse Electric & Mfg. Company, Pittsburg (Pa.), 1904-05.

EVERETT PARKER LESLEY, Assistant Professor of Mechanical Engineering.

A. B., Leland Stanford Jr. University, 1897; M. M. E., Cornell University, 1905. Apprentice and Foreman in Union Iron Works, San Francisco, 1897-1903, Assistant Inspector to Naval Constructor, 1903-04; Draftsman at U. S. Experimental Model Basin, Washington (D. C.), 1905-07.

ROBERT BARTHOLOW HARSHE, Assistant Professor of Drawing.

B. L., University of Missouri, 1899. Graduate Student, University of Missouri, 1899-1901; Student, Chicago Art Institute, 1901-02; Supervisor Manual Arts, Columbus (Ga.), 1902; Instructor, Summer School of the South, 1903; Manual Training Scholar, Teachers' College, Columbia University, 1903-04; Scholar, Ipswich Summer School, 1904, Art Students' League, 1904-05; Instructor, University of Missouri, 1905-06; Instructor, New York School of Industrial Art, 1906-07; Director, Nantucket Summer School of Design, 1907.

JOSEPH WALTER BINGHAM, Assistant Professor of Law.

A. B., University of Chicago, 1902, J. D., 1904. Acting Assistant Professor of Law, Cornell University, 1905-07.

PERCY ERWIN DAVIDSON, Assistant Professor of Education.

A. B., Leland Stanford Jr. University, 1898; A. M., Harvard University, 1905. Teacher, Grammar and High Schools, San Diego (Cal.), 1898-1900; Supervisor of History and English Teaching, San Francisco State Normal School, 1900-03; Assistant in Education, San Diego State Normal, 1903-04; Graduate Student, Teachers' College, Columbia University, 1905-07; Instructor in Logic and History of Education, New York Training School for Teachers, 1906-07.

JAMES FARLEY McCLELLAND, Assistant Professor of Mining.

E. M., Columbia University, 1900. Instructor in Geology and Mining, University of Wyoming, 1900-01; with Indiana Gold Dredging Co., Oroville (Cal.), 1901-02; Instructor in Mining, Columbia University, 1902-03; General Mining Practice, Tonopah (Nev.), 1905-08.

‡ Beginning September, 1908.

GEORGE HOLLAND SABINE, Assistant Professor of Philosophy.

A. B., Cornell University, 1903, Ph. D., 1906. Sage Fellow in Philosophy, Cornell University, 1905-06, Assistant in Philosophy, 1906-07.

GEORGE HENRY DANTON, Acting Assistant Professor of German.

A. B., Columbia University, 1902, Ph. D., 1906. Assistant in Comparative Literature, Columbia University, 1902-03; Austin Teaching Fellow in German, Harvard University, 1903-04; Ottendorfer Memorial Fellow, New York University, and Student, Berlin and Munich, 1904-05; Instructor in German, College for Women, Western Reserve University, 1905-07.

†JULIUS EMBRET PETERSON, Foreman of the Forge.

EDWARD JOHN STANLEY, Instructor in Pattern Making.

Machinist with Pacific Iron Works, San Francisco, 1878-79; Pattern Maker, 1880-86; Foreman, Pattern Shop, Union Iron Works, San Francisco, 1886-1901.

JAMES BENNETT LIGGETT, Instructor in Foundry Practice.

Apprentice and Foundry Moulder, Falls Rivet and Machine Co., Cuyahoga Falls (Ohio), 1883-88, Webster, Camp & Lane, Akron (Ohio), 1888-93, Bowler & Co., Cleveland (Ohio), 1893-98; Foundry Foreman, City Foundry Co., Cleveland (Ohio), 1898-99; Foreman, Born Steel Range Co., Cleveland (Ohio), 1899-1902; Foreman of Foundry, Westinghouse Electric Co., Cleveland (Ohio), 1902.

CHLOE LESLEY STARKS, Instructor in Drawing.

THEODORE PALMATEER, Foreman of the Machine Shop.

PAYSON JACKSON TREAT, Instructor in History.

A. B., Wesleyan University, 1900; A. M., Columbia University, 1903.

RENNIE WILBUR DOANE, Instructor and Curator in Entomology.

A. B., Leland Stanford Jr. University, 1896. Assistant in Zoology and Botany, Washington State College, 1896-99, Assistant Professor of Zoology and Entomology, 1899-1901; Superintendent Fisheries Experiment Station, Keyport (Wn.), 1901-03.

HOMER PRICE EARLE, Instructor in Romanic Languages.

A. B., Leland Stanford Jr. University, 1904. Student, Johns Hopkins University, 1904-06.

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Physical Director, Young Men's Christian Association, Dixon (Ill.), 1897-98, Aurora (Ill.), 1899-1900; Assistant in Encina Gymnasium, 1902-04; Director of Vanderbilt University Gymnasium, 1904-06.

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CHARLES NORMAN CROSS, Instructor in Mechanical Engineering.

M. E., Cornell University, 1906. Assistant Engineer, Long Island State Hospital, Brooklyn (N. Y.), 1905; Dynamo and Switchboard Attendant with the New York Edison Co., New York City, 1905-06; Electrician with the Lackawanna Steel Co., Buffalo (N. Y.), 1906.

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A. B., Leland Stanford Jr. University, 1903, A. M., 1904. Student, University of Leipzig, 1904-05; Assistant Chemist, San Francisco Board of Health, 1905-06.

BRUNO BOEZINGER, Instructor in German.

A. B., Fort Worth University, 1894, A. M., 1895. Instructor in German, North Texas Normal School, 1895-98; Principal, German Department, San Antonio (Texas) H. S., 1899-1906; Instructor in German, Summer School, University of Texas, 1896.

THERESA PEET RUSSELL, Instructor in English.

Ph. B., State University of Iowa, 1895. Teacher in Denison Normal School, 1895-96; Principal Viliisca High School, 1896-98; Graduate Student at Radcliffe College, 1898-99; Teacher in Anamosa High School, 1899-1900.

HERMANN JOHANN HILMER, Instructor in German.

A. B., University of Michigan, 1904; A. M., Columbia University, 1905. Assistant in German, University of Wisconsin, 1905-06; Student, University of Leipzig, 1906-07.

CATHERINE LEOTA FIELDS, Instructor in English.

A. B., Leland Stanford Jr. University, 1903, A. M., 1907.

WILLIAM ARTHUR HILLEBRAND, Instructor in Electrical Engineering.

A. B., Cornell University, 1905. Student, Leland Stanford Jr. University, 1905-06; with Western Electric Company, San Francisco and Los Angeles, 1906-07.

LUTHER WILLIAM BAHNEY, Instructor in Metallurgy.

Ph. G., University of California, 1897. Instructor in Microscopy, Department of Pharmacy, University of California, 1898-1900; Sampler, Copper King Mine Company, 1900-01; Student in Chemistry with L. Falkenau, 1901-02; Chemist and Chief Assayer, Selby Smelting and Lead Company, 1902-06; Manager of Xitinga Mines, Mexico, 1906.

EDWARD WILLIAM HOPE, Instructor in Greek.

A. B., University of Pennsylvania, 1898; A. M., Leland Stanford Jr. University, 1903; Ph. D., Johns Hopkins University, 1905. Student, Philadelphia Divinity School and Union Theological Seminary, 1897-1900; Instructor in the Classics, St. George's School, Newport (R. I.), 1900-01; Student, Universities of Berlin and Munich, 1901-02; Acting Adjunct Professor of Greek, University of Alabama, 1905-06; Instructor in Classics, University of Illinois, 1906-07.

†Absent on leave, 1907-08.

JOHN HARRISON FOSS, Instructor in Civil Engineering.

A. B., Leland Stanford Jr. University, 1903. Assistant Engineer, Hamakua Ditch, Huelo, Maui (Hawaiian Islands), 1903-04, Engineer, 1904-05; Engineer, Maui Agricultural Co., Paia, Maui, 1905-07.

FREDERICK HALL FOWLER, Instructor in Civil Engineering.

A. B., Leland Stanford Jr. University, 1905. Topographer, Western Pacific Railroad, and Recorder, Bay Cities Water Company, 1903; Assistant in Civil Engineering, Leland Stanford Jr. University, 1904-05; Assistant Engineer in Charge of Construction of California Section of U. S. Laguna Dam, for J. G. White & Co., 1905-06; in Charge of Slippery Ford Station, Bay Cities Water Company, 1906-07.

ROBERT HENRY HARCOURT, Instructor in Forge Practice.

Blacksmith with Risdon Iron Works, San Francisco, 1898-1901, 1903-04; with Hammond Car and Elevator Company, San Francisco, 1901-02, 1904-05; with National Iron Works, San Francisco, 1902-03; with Abner Doble Steel Company, San Francisco, 1905-06, Foreman of Forge Shop, 1906-07.

JESSE DWIGHT SUTER, Instructor in Applied Mathematics.

A. B., University of Wisconsin, 1904, A. M., 1905.

EDWARD JORDAN, Instructor in Applied Mathematics.

B. S., University of Sydney, 1901. Assistant Government Geologist and Instructor in Physics and Mathematics, Brisbane Technical College, 1901-02; Science Master, Scotch College, Perth, and Instructor in Physics and Mathematics, Perth Technical School, 1903; Science and Mathematics Master, St. Peter's College, Adelaide, 1904-07.

ERNEST GEORGE ATKIN, Instructor in Romanic Languages.

A. B., Cornell University, 1904. Student, Cornell University, 1904-05; Instructor in French and German, Centenary Collegiate Institute, 1905-06; Cornell University Traveling Fellow in Romanic Languages, 1906-07.

ANDREW EDWARD HARVEY, Instructor in History.

A. B., Princeton University, 1898; B. D., Union Theological Seminary, 1901; Ph. D., University of Marburg, 1906. Graduate Student, Union Theological Seminary, 1901-02; Student, Universities of Berlin and Marburg, 1902-06.

*JOHN KESTER BONNELL, Instructor in English.

A. B., Leland Stanford Jr. University, 1903. San Francisco Harvard Club Fellow at Harvard University, 1903-04.

*ROBERT EARL RICHARDSON, Instructor in Bionomics.

A. B., University of Illinois, 1901, A. M., 1903. Fellow in Zoology, University of Illinois, 1902-03; Assistant, Illinois State Laboratory of Natural History, 1903-06; Research Assistant in Ichthyology (in pay of U. S. Fish Commission), Leland Stanford Jr. University, 1906-07; Preparator in Zoology, University of California, 1907-08.

*WILLIAM GEORGE BATEMAN, Instructor in Chemistry.

A. B., Leland Stanford Jr. University, 1907.

*PERCY ALVIN MARTIN, Instructor in European History.

A. B., Leland Stanford Jr. University, 1902, A. M., 1903.

†HARRY BAKER HUMPHREY, Acting Instructor in Botany.

B. S., University of Minnesota, 1899; Ph. D., Leland Stanford Jr. University, 1907.

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* Beginning September, 1908

MARY CYNTHIA DICKERSON, Acting Instructor in Bionomics.

B. S., University of Chicago, 1897. Student, University of Michigan, 1889-91; Principal of High School, Sandwich (Ill.), 1891-93; Instructor in Biology, Grand Rapids (Mich.) High School, 1893-96; Student at Woods Holl Marine Biological Laboratory, 1896-97; Head of Department of Biology, Rhode Island Normal School, 1898-1906.

RICHARD MORRIS HOLMAN, Acting Instructor in Botany.

A. B., Leland Stanford Jr. University, 1907.

LECTURERS

LUTHER BURBANK, Lecturer on Plant Evolution.

MORRIS ELMER DAILEY, Lecturer in Education.

A. M., Indiana University, 1897; LL. D., Drake University, 1901. Superintendent of City Schools, Fresno (Cal.), 1897-99; Vice-President and Teacher of History, San Jose State Normal School, 1899-1900, President since 1900.

JOHN SLATER PARTRIDGE, Lecturer in Law.

A. B., University of California, 1892, A. M., 1894. Instructor in Latin, Lowell High School, San Francisco, 1893-97; Assistant City Attorney, San Francisco, 1904-05.

ASSISTANTS

([1] First Semester; [2] Second Semester.)

Greek

ERNEST JOHN CUMMINGS.

Latin

[2]JAMES GRANT FERGUSSON.

German

[2]ANNINA PERIAM DANTON.

A. B., Woman's College of Baltimore, 1898; A. M., Columbia University, 1901, Ph. D., 1905. Special Fellow in Germanic Languages and Literatures, Columbia University, 1900-01; Alumnae Fellow, Woman's College of Baltimore, 1902-03, University of Leipzig, 1902-03; Assistant in German, Barnard College, 1903-05, Tutor, 1905-07.

HELENA MAY NYE.

Ph. B., Marietta College, 1902; A. B., Leland Stanford Jr. University, 1905.

Romanic Languages

SOPHIE BOEZINGER.

Graduate State Normal, Neuchatel, Switzerland, 1875.

SIMON NOVELO CÁCERES.

JOSEPHINE DILLON.

English

ANNA MATILDA BILLE.
A. B., Leland Stanford Jr. University, 1908.

ELIZABETH HIETT CONE.
A. B., Leland Stanford Jr. University, 1901.

[2]DAVIDA CATHERINE FRENCH.

CHARLES LESTER GEER.
A. B., Leland Stanford Jr. University, 1907.

[1]HELEN THOBURN.
A. B., Leland Stanford Jr. University, 1908.

Psychology

ESTHER MAE CRANDALL.
A. B., Leland Stanford Jr. University, 1903, A. M., 1905.

Education

JESSE BRUNDAGE SEARS.

History

[2]NELLIE A. COOPER, Clerk.

CHARLOTTE MABLE LORD.
A. B., Leland Stanford Jr. University, 1902, A. M., 1905.

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MARY WILHELMINE WILLIAMS.
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Economics

IRA BROWN CROSS.
A. B., University of Wisconsin, 1905, A. M., 1906.

Drawing

MAUD HOUSTON LANKTREE.
A. B., University of California, 1902.

Mathematics

ANNIE LOUISE WRIGHT.
A. B., Leland Stanford Jr. University, 1896, A. M., 1897.

Applied Mathematics

ROBERT LONG DAUGHERTY.

CYRIL FRANK ELWELL.
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[2]LEON BENEDICT REYNOLDS.
A. B., Hillsdale College, 1906.
ARTHUR FAY TAGGART.
[2]FRANK RUMSEY VAN CAMPEN.

Physics

[2]WILLIAM FRANK CRANE.
SHIRLEY HYATT.
A. B., Leland Stanford Jr. University, 1906.
GEORGE FRANCIS McEWEN.
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PERLEY ASON ROSS.

Chemistry

WILLIAM GEORGE BATEMAN.
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ALEXANDER MACBETH CUTHBERTSON.
JOHN FRANKLIN ELLIS.
ELMER R. EWELL.
[2]CLAUDE FERGUSON.
WALTER HERVEY GARDNER.
[1]DENNIS ROBERT HOAGLAND.
A. B., Leland Stanford Jr. University, 1907.
ROBERT ALTON JONES.
LOVELL LANGSTROTH.
EDWARD WALDO RICE.
ELMER RUPEL WEAVER.

Systematic Botany

ERNEST GRISWOLD DUDLEY.
[1]OLIVE AGATHA HUMPHREY.
B. S., University of Minnesota, 1899.
JAMES IRA WILSON McMURPHY.

Physiology and Histology

LEO LEONIDAS STANLEY.
[2]FRANK WALTER WEYMOUTH.

Hygiene and Physical Training

FLORENCE BOLTON.
A. B., Leland Stanford Jr. University, 1907.

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EDITH EUGENIE JOHNSON.
M. D., Cornell University Medical School, 1907.

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ARCHIBALD FORBES MESTON.

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[2]ELLA CRAIG RUSS.
Graduate, New Haven (Conn.) Normal School of Gymnastics, 1907.

HAZEL WOOD SEVERY.
A. B., Leland Stanford Jr. University, 1907.

OLIVE LOUISA STREETER.

VERA TOWNSEND.
A. B., Leland Stanford Jr. University, 1901.

Zoology

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Entomology and Bionomics

[2]WILLIAM FLAGG DERBY.
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Geology and Mining

ROY SELDON KELLOGG.

MARGARET A. POST, Clerk.

DONALD STEEL.

Mechanical Engineering

WILLIAM LEAVENWORTH DURAND.
A. B., Leland Stanford Jr. University, 1907.

WILLIAM CHRISTIAN THEILE.

JOHN IBBOTSON THOMPSON.

Civil Engineering

[1]HOWARD FOSTER CLARK.
[2]ERNEST DELEVAN COLE.
ARTHUR CHAPIN COONRADT.
SANFORD BALLARD DOLE.
EVERETT ST. JOHN DUNBAR.
[2]FRANK ADOLPH HERRMANN.
ARTHUR DICKINSON HUGHES.
[1]CLARK CYRUS JOHNSON.
[2]ERNEST WALKER SAWYER.
[1]BURCHELL WILLIAMS UPSON.

Electrical Engineering

PERCY H. WILLIAMS.

President's Office

WILLIAM DAVID FAYETTE BURCHAM.
HERBERT ROWELL STOLZ.
[2]HELEN THOBURN.
A. B., Leland Stanford Jr. University, 1908.

Registrar's Office

CECELIA FREEMAN ATHERTON.
A. B., Leland Stanford Jr. University, 1904.

SUSAN BROWN BRISTOL, Secretary in Charge of Recommendation of Teachers.
A. B., Leland Stanford Jr. University, 1897.

[1]HARRIETT BROWN COOLIDGE, Acting Secretary Recommendation of Teachers.
A. B., Leland Stanford Jr. University, 1902.

FRED DAN POST, Stenographer.

UNIVERSITY LIBRARY

Staff

JOHN EDWARD GOODWIN, Supervisor Stacks and Loans.
A. B., University of Wisconsin, 1901; B. L. S., New York State Library School, 1905. Classifier and Cataloguer, Madison (Wis.) Free Library, 1901-04; Assistant, Legislative Reference Department, Wisconsin Free Library Commission, 1903.

HELEN BINNINGER SUTLIFF, Acting Head Cataloguer.

A. B., University of Kansas, 1890. Head Cataloguer, University of Kansas Library, 1891-1905; Cataloguer in Columbia University Library, Summer, 1901.

ALICE NEWMAN HAYS, Classifier.

A. B., Leland Stanford Jr. University, 1896; B. L. S., New York State Library School, 1903. Assistant, Home Education Department, New York State Library, 1901.

HELEN LATHROP, Reference Librarian.

A. B., Leland Stanford Jr. University, 1902. Student, New York State Library School, 1905-06; Assistant, Children's Department, Carnegie Library of Pittsburgh, 1906-07.

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Assistants

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A. B., University of California, 1903. Student, University of California, Library Summer School, 1907.

ADA MORSE CLARK, Stenographer.

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LOUISE MARCUS.

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CORNELIA DOUGLAS PROVINES.

MAIDA ROSSITER.

A. B., Cornell University, 1903.

RAYMOND BERT WHEELER.

[2]M. J. WOODRUFF, Stenographer.

MEMORIAL CHURCH

GODFREY CARL BUEHRER, Organist.

A. M., Rensselaer College (Indiana), 1896; Mus. Doc. Hon., Santa Clara College, 1907. Student Scola Cantorum, Paris, 1904-06; Instructor of Band, Orchestra, and Choir, Rensselaer College, 1892-96; Instructor, St. Joseph's College, San Jose, 1897-98; Organist, St. Joseph's Church, San Jose, 1899 1908; Professor of Music, Santa Clara College, 1901-05.

LELAND STANFORD JUNIOR MUSEUM

HARRY C. PETERSON, Curator.

Charter Member American Museum Association.

ROBLE HALL

LUCRETIA HOUSTON LANKTREE, Matron.

PART II

ORGANIZATION, ADMISSION RESIDENCE AND GRADUATION

ORGANIZATION

Foundation

The Leland Stanford Junior University was established under an Act of the Legislature, approved March 9, 1885, entitled "An Act to advance learning, the arts and sciences, and to promote the public welfare by providing for the conveyance, holding, and protection of property, and the creation of trusts for the founding, endowment, erection, and maintenance within this State of universities, colleges, schools, seminaries of learning, mechanical institutes, museums, and galleries of art." The Founding Grant, executed November 11, 1885, was made public at a meeting of the Board of Trustees, held in San Francisco, November 14, 1885. The cornerstone of the inner quadrangle was laid May 14, 1887, and the institution opened to students October 1, 1891.

Provisions of the Founding Grant

"We, Leland Stanford and Jane Lathrop Stanford, husband and wife, grantors, desiring to promote the public welfare by founding, endowing, and having maintained upon our estate known as the Palo Alto Farm, and situated in the Counties of San Mateo and Santa Clara, State of California, United States of America, a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree, to that end, and for that purpose, do hereby grant," etc.

"Its nature, that of a university with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories and conservatories, together with all things necessary for the study of agriculture in all its branches, and for mechanical training, and the studies and exercises directed to the cultivation and enlargement of the mind;

"Its object, to qualify students for personal success and direct usefulness in life;

"And its purposes, to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness."

"Since the idea of establishing an institution of this kind, for the benefit of mankind, came directly and largely from our son and only

child, Leland, and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University."

The general management and control of the institution is vested in a Board of Trustees originally numbering twenty-four, and chosen for life. By the Amending Act of May 31, 1899, the number of trustees was reduced to fifteen, with future elections for a term of ten years. The Board of Trustees fills all vacancies.

"The Trustees shall have power and it shall be their duty:

"To establish and maintain at such University an educational system which will, if followed, fit the graduate for some useful pursuit, and to this end to cause the pupils, as early as may be, to declare the particular calling which in life they may desire to pursue. . . .

"To prohibit sectarian instruction, but to have taught in the University the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man.

"To have taught in the University the right and advantages of association and coöperation.

"To afford equal facilities and give equal advantages in the University to both sexes.

"To maintain on the Palo Alto estate a farm for instruction in agriculture in all its branches. . . .

"It shall be the duty of the Trustees to give to the President of the University the following powers:

"To prescribe the duties of the professors and teachers; to remove professors and teachers at will; to prescribe and enforce the course of study and the mode and manner of teaching; such other powers as will enable him to control the educational part of the University to such an extent that he may justly be held responsible for the course of study therein and for the good conduct and capacity of the professors and teachers."

"The Board of Trustees shall annually report all their proceedings to the person who for the time being shall fill the office of Governor of the State of California, and shall accompany such report with a full account of their financial operations for the preceding year, and with a statement of the financial affairs of the institution"

"The Trustees shall constitute the president and professors the faculty of the University, and shall prescribe their powers and duties as such."

A clause in the Founding Grant reserved to the grantors the right to alter, amend, or modify the terms and conditions of the grant in important particulars. Under this provision amendments were made by Mrs. Stanford, June 1, 1897; May 31, 1899; March 28, 1902; October 3, 1902; and June 1, 1903. These amendments were concerned mainly with matters of detail, but included also a provision limiting the number of women students to five hundred.

An Amendment to the Constitution of the State of California, adopted November 6, 1900, "permitted, approved, and confirmed all the trusts, estates, terms, and conditions" of the Founding Grant and of all the deeds, conveyances, and other instruments made and delivered before that date, and also authorized the Legislature, under certain conditions, to exempt the property of the University from taxation.

The University Faculty

Under the Articles of Organization, adopted by the Board of Trustees March 31, 1904, the power and authority of the University Faculty is vested in the Academic Council, consisting of the President of the University, the professors and associate professors, the librarian, the registrar, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board.

The Executive Committee of the Academic Council consists of the President, Vice-President, Registrar, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Academic Committees of the Council and formulates the duties and controls the policy of Administrative and Academic Committees.

The Standing Administrative Committees of the Council are appointed by the President subject to the approval of the Advisory Board.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A Department Faculty has direction of the work of instruction in the department and of the internal administration of the department, subject only to such control as is vested in the Board of Trustees, the President of the University, or the Academic Council. The Executive Head of the Department Faculty is designated by the President with the approval of the Advisory Board and of the Board of Trustees.

Departments

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(I) Greek, Latin, Germanic Languages, Romanic Languages, English Literature and Rhetoric, English Philology; (II) Botany, Systematic Botany and Forestry, Physiology and Histology, Hygiene, Entomology and Bionomics, Geology and Mining; (III) Psychology, Mathematics, Physics, Chemistry; (IV) Philosophy, Education, History, Economics and Social Science, Law; (V) Drawing, Applied Mathematics, Civil Engineering, Mechanical Engineering, Electrical Engineering.

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, and located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

Buildings

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied

in color, the stonework of broken ashlar, with rough rock-face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle. They are also connected on the outer side by open arcades extending entirely around the quadrangle. The extreme length of the Outer Quadrangle is 894 feet.

The Leland Stanford Junior Museum, a series of connected buildings in quadrangular form, is situated a quarter of a mile from the Quadrangles, and on the west side of the Palo Alto Avenue. The museum contains the archæological and art collections of the University.

The Chemistry Building is located between the Quadrangles and the Museum. It consists of two separate structures—the main Chemistry Building and the Assaying Laboratory.

Behind the central quadrangles are located the workshops of the engineering departments, experimental laboratories, power-houses, etc.

The dormitories are east and west of the Quadrangles. Encina Hall, for young men, is at the east, and has accommodations for three hundred students. Roble Hall, for young women, is at the west, and will accommodate one hundred students. Madrono Hall is a frame building, at present leased to private parties, but receiving only women students. It will accommodate about thirty students.

Encina Gymnasium and Roble Gymnasium are frame buildings, equipped with the necessary apparatus and appliances for physical training.

The University Inn is a frame building intended primarily as a University commons for students living on the campus.

The grounds immediately about the University have been reserved in part for experimental and ornamental purposes, in part as residence sites for members of the Faculty and others who may desire to live on the University campus.

ADMISSION TO THE UNIVERSITY

I. TO UNDERGRADUATE STANDING

Candidates must be at least sixteen years of age. They must present satisfactory recommendations as to personal character, and, if from other colleges or universities, must bring letters of honorable dismissal.

Preparation for undergraduate standing implies the completion of a full four years' high school course, or its equivalent. The various high school subjects recognized by the University are measured in terms of units, a unit representing a course of study covering not less than one hundred and fifty recitation periods (two laboratory periods being regarded as the equivalent of one recitation period).

Fifteen entrance units are required for undergraduate standing. These fifteen units may be made up of English Composition and any combination of other subjects in the entrance list, avoiding duplication, which will make up the required number of units. Candidates desiring to study Mathematics or Engineering must obviously include such elementary mathematics as is not taught in the University; those wishing to take Latin in the University must offer at least two entrance units in that subject.

Entrance credit may be obtained (A) on examination (see pp. 61-62), or (B) wholly or in part without examination (see pp. 62-64).

Entrance Subjects
(with unit values)

1. English Composition (1½)
2a. El. English Lit. (1)
b. Adv. English Lit. (1)
c. History English Lit. (½)
3a. El. Algebra (1, 1½)
b. Adv. Algebra (½, 1, 1½)
4. Plane Geometry (1)
5. Solid Geometry (½)
6. Trigonometry (½)
7. Physics (1)
8. Chemistry (1)
9. Physiology (1)
10. Botany (1)
11. Zoology (1)
12. Biology (1)
21a. El. Latin (2)
b. Adv. Latin: Cicero (½)
Virgil (½)
Composition (½, 1)
22a. El. Greek (2)
b. Adv. Greek (1)
23. Freehand Drawing (1)
24. Mech. (Geom.) Draw. (½, 1)
25. Woodworking (½)
26. Forge Work (½)
27. Foundry Work (½)
28. Machine Shop Work (1)
29. Astronomy (½)
30. Biblical Hist. & Lit. (½, 1)
31. Civics (½)

13. Hygiene (1)
14. Ancient History (1)
15. Med. and Mod. History (1)
16. English History (1)
17. American History (1)
18a. El. Spanish (2)
b. Intermed. Spanish (1)
19a. El. French (2)
b. Intermed. French (1)
c. Adv. French (1)
20a. El. German (2)
b. Intermed. German (1)
c. Adv. German (1)
32. Economics (½)
33. Arch. Drawing (1)
34. Physical Geography (1)
35a. Musical Appreciation (1)
b. Harmony (1)
c. Counterpoint (1)
d. Performance (1)
36. Domestic Science (1)
37a. Bookkeeping (1)
b. Shorthand, Typewriting (1)
c. Commercial History, Geography, and Law (1)

Special Regulations Governing Admission of Women

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred." In conforming to this provision the following plan of admission has been adopted:

Graduates of universities of recognized standing will be admitted without previous application, provided they present themselves for matriculation upon the regular registration days. Women once admitted to the University will be allowed to continue without further application, so long as scholarship and conduct are satisfactory, and provided they present themselves for registration on the regularly appointed days. Places will not be held for women after the regular registration days, except by permission of the Committee on Registration granted in advance.

For the remaining number of women students permitted by the Founding Grant (for September, 1908, approximately 150) the plan of admission is as follows:

Applications may be made at any time. They must state the proposed time of entrance and the credentials which the candidate expects to offer. To insure consideration applications made more than ten months before the proposed date of matriculation must be renewed (by written notice or new application) some time during the ten months immediately preceding the proposed date of matriculation. Blanks for application may be obtained of the Registrar.

Numbered lists will be begun July 10th (for the August-September matriculation), and October 10th (for the January matriculation). All candidates whose credentials are complete and in the hands of the

Registrar on the dates specified will be given numbered admission cards in the order of original application. After the first lists are made up, additional numbered cards will be issued in the order in which complete credentials are received, the order of original application applying where the complete credentials of more than one candidate are received on the same date.

On registration day candidates will be preferred in their serial order. After registration day the serial order of candidates actually present will be observed.

Candidates receiving numbered cards for a given date, but not matriculating at that time, may be transferred to any succeeding list, in their serial order, by giving due notice to the Registrar (before October 10th, or July 10th, as the case may be).

Requirements in Particular Subjects

The following will indicate the preparation necessary in the various entrance subjects:

1. English Composition

The work in English Composition should be given at least two recitations a week throughout the entire high school course. The greater part of this time should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric.

The examination is to test the candidate's ability to write exercises not only free from marked deficiencies in spelling, punctuation, sentence structure, and paragraphing, but also indicative of his ability to think consecutively on a simple subject. The subjects which are set at the time of the examination will be drawn for the most part from the candidate's own experiences. (1½ units)

NOTE.—All first-year undergraduates (including special students who become candidates for a degree, and students coming from other institutions with less than twenty units of advanced credit) will be required to satisfy the University standard in English Composition. This may be done either (1) by taking the regular examination in Entrance Subject 1 (required of all unrecommended students), or (2) by taking a Matriculation Test (required of all recommended students). This latter test is given during matriculation week. Since it is the exact equivalent of the Entrance Examination, recommended students who find it convenient to anticipate the Matriculation Test by taking the earlier examination are encouraged to do so.

Those who pass either of the above tests may be exempted from

Composition Work in the University, or may enter Course 2 (*a* or *b*) at their option. Recommended students who do not pass will be required to register in English A at once (unless by reason of numbers, or by special arrangement, the Department assigns some students to a later semester) and to remain in it until their work is of passing grade.

2. English Literature

The work in English Literature should be given an average of at least three recitations a week throughout the four years of the preparatory course. It should be so conducted as to give the student not only an appreciative understanding of the books selected either for general or for more intensive study, but also a knowledge of their place in the history of English Literature, and especially an ability to read aloud intelligently both prose and verse.

[Special Note.—The following list of books is that recommended by the College Entrance Examination Board for use during the years 1909-11. It is now adopted for that period in accordance with the announcements of previous Registers. If applicants are unable to adapt their course of study to the new requirements, the examiner will for the first year accept the earlier list of books.]

a. Elementary.

Group I (two to be selected).—Shakspere's As You Like It, Henry V, Julius Cæsar, The Merchant of Venice, Twelfth Night.

Group II (one to be selected):—Bacon's Essays; Bunyan's The Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiography.

Group III (one to be selected):—Chaucer's Prologue; Spenser's Faerie Queene (selections); Pope's The Rape of the Lock; Goldsmith's The Deserted Village; Palgrave's Golden Treasury (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns.

Group IV (two to be selected):—Goldsmith's The Vicar of Wakefield; Scott's Ivanhoe; Scott's Quentin Durward; Hawthorne's House of the Seven Gables; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; Dickens's Tale of Two Cities; George Eliot's Silas Marner; Blackmore's Lorna Doone.

Group V (two to be selected):—Irving's Sketch Book; Lamb's Essays of Elia; De Quincey's Joan of Arc and The English Mail Coach; Carlyle's Heroes and Hero Worship; Emerson's Essays (selected); Ruskin's Sesame and Lilies.

Group VI (two to be selected):—Coleridge's The Ancient Mariner; Scott's The Lady of the Lake; Byron's Mazeppa and The Prisoner of Chillon; Palgrave's Golden Treasury (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Macaulay's Lays of Ancient Rome; Poe's Poems; Lowell's The Vision of Sir Launfal; Arnold's Sohrab and Rustum; Longfellow's The Courtship of Miles Standish; Tennyson's Gareth and Lynette, Launcelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Evelyn Hope, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, The Boy and the Angel, One Word More, Hervé Riel, Pheidippides. (1 unit)

b. Advanced.—The books for detailed study should be chosen from the following list as indicated. Preparation should include not only an examination of the significant details in the text, but also a study of the work in its larger outlines—its literary structure, style, and adaptation to its purpose.

(1) Shakspere's Macbeth; (2) Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; (3) Burke's Speech on Conciliation with America, *or* Washington's Farewell Address and Webster's First Bunker Hill Oration; (4) Macaulay's Life of Johnson, *or* Carlyle's Essay on Burns. (1 unit)

c. History.—Candidates who offer *2b* may, at their option, offer *2c* in addition. The examination in both subjects will be given in the same period. Preparation should consist in a brief outline of the history of English Literature with a view to making clear the character and the tendencies of the more important literary epochs and associating the chief books and authors in their proper periods.

(½ unit)

3. Algebra

a. Elementary.—Algebra through quadratic equations: including the fundamental laws, the laws of exponents for positive and negative integers, formulas of multiplication, the binomial theorem for a positive integral exponent, the transformation of fractions, factoring, common divisors and multiples, radicals, simultaneous equations of the first degree, quadratic equations, the formation of equations with given roots, theory of quadratic equations, and the solution of problems involving the various classes of equations.

Emphasis should be placed upon the methods of factoring, and the solution of equations. Facility and accuracy in the manipulation of

algebraic expressions should be attained, as well as an understanding of the meaning of the various operations. The solution of a large number of moderately difficult problems is preferable to the solution of a smaller number of more difficult ones; while the frequent use of problems involving literal expressions serves to impress upon the pupil the generality of algebraic results. (1 to 1½ units)

b. Advanced I.—Simultaneous quadratic equations and equations solved like quadratics; fractional indices; fractional and irrational equations; the extraction of roots of polynomials; arithmetic, geometric, and harmonic series; permutations and combinations. (½ unit)

c. Advanced II.—An additional unit or half unit may be given in Advanced Algebra for a suitable amount of work upon a connected group of the topics usually included under the heading of advanced or higher algebra, such as, the binomial theorem and convergence of series, determinants, the theory of equations, etc. (½ to 1 unit)

4. Plane Geometry

In the teaching of Geometry stress should be placed upon accuracy of statement as well as upon strict reasoning. This end may be promoted by requiring original propositions to be written out in full in a neat and attractive manner. Emphasis should be placed upon clear thinking as well as upon the acquirement of geometrical knowledge.

The requirement in plane geometry includes problems in mensuration of plane figures and original propositions, as well as the usual demonstrated theorems. The following topics are included: the general properties of plane figures; the circle, and the measure of angles; areas; regular polygons, and the measure of the circle. (1 unit)

5. Solid Geometry

The topics included are: relations of lines and planes to space; the properties of prisms, pyramids, cylinders, and cones; the sphere and spherical triangle; also the mensuration of solids, and original propositions. (½ unit)

6. Trigonometry

This subject includes the general formulas of plane trigonometry; the theory of logarithms and the use of logarithmic tables; applications to the numerical solution of triangles and of simple problems in heights and distances. (½ unit)

7. Physics

The equivalent of one year's work in the high school, including both laboratory and text-book work. It is preferred that at least one-half

the time be given to laboratory work in which the students perform individually such experiments as are described in the better class of laboratory manuals, of which Hall and Bergen's Physics may be named as an example. Accurate notes of the laboratory work should be kept. The text-book study should cover the ground of some modern text, of which Crew's Physics is a good example.

The desired preparation, both in laboratory and text-book work, is fairly represented by Sanford's Elements of Physics. (1 unit)

8. Chemistry

Besides the usual text-book and recitation work, each student must have a laboratory course in which he performs the experiments for himself. Accurate notes of the laboratory work should be kept. The necessary amount of laboratory work cannot be obtained in less than four hours per week for one school year, in addition to the classroom work. It is preferred that the laboratory work be entirely devoted to illustration of the important facts and principles of general chemistry, rather than partly to analytical chemistry. (1 unit)

Students who receive entrance credit on recommendation, and who wish to continue the study of chemistry in the University, will be admitted at once to the second half of course *a*, and will be required to begin course 1.

9. Physiology

The elements of human physiology and hygiene, the equivalent of Martin's Human Body. The text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

Candidates who have taken only the work in elementary physiology and hygiene done in the grammar or intermediate grades are not prepared to offer the subject for entrance credit. The elementary physiology and hygiene of the grammar grades in this regard, is in the same category as are the other subjects studied in the grammar grades, such as arithmetic and geography, which are assumed as preliminary to the subjects offered for entrance. (1 unit)

10. Botany

The requirements outlined by the College Entrance Examination Board (based on the report of the Committee on Botany of the Science Department of the National Educational Association, modified by a committee of the Society for Plant Morphology and Physiology) may be taken to represent approximately what is expected of the candidate for entrance credit in Botany. These requirements call for a

full year's work, of which it is expected that at least two-thirds shall be genuine laboratory work. One-half of the year is to be devoted to the general principles of morphology, physiology, and ecology. In this work proper account should be taken of the lower plants as well as of the flowering plants. The second half-year is devoted to a study of the natural history of representatives of the larger groups of plants, and the principles of classification. This study is expected to include representatives of the algæ, fungi, mosses, ferns, and the principal types of flowering plants. If it seems desirable, the order of the two half-years' work may be reversed or combined in a different way (Stevens's Introduction to Botany (Heath & Co., 1902) may be mentioned as indicating the scope of the work.)

In preparing to meet the requirements in Botany, the main thing to bear in mind is that the work shall be of a practical nature; that the study be mainly specimens and not books. A study of the growth and development of the forms selected is of the highest importance, and should be made a prominent feature in the work.

If possible, the student should be allowed the use of a compound microscope; but when this is not practicable, microscopic demonstrations by the instructor are indispensable. The laboratory work of the students may be supplemented by such explanatory and text-book work as may be deemed necessary; but this must be understood to supplement and not to replace the laboratory work.

Notes and drawings should be neatly made in blank books of moderate size. The paper for the drawings should be white, unruled, hard, smooth, but not glazed. A hard pencil should be used in drawing, and accuracy and neatness are both to be emphasized. The descriptive notes should not be written upon the same sheets as the drawings, and should be clear and concise, including only what the student has himself seen. Notes taken from lectures or reading should be kept entirely apart from the student's own observations.

No credit will be given for an herbarium. The time necessary to prepare an herbarium may be better devoted to a study of the living plants. (1 unit)

11. Zoology

The candidate should possess a knowledge of the structure and relationships of a series of animals, gained primarily through the study of living forms and the dissection of specimens in the laboratory. At least four hours per week for one school year should be spent in actual laboratory work, which should include a study of the following forms, or their equivalent; amœba, paramœcium, hydra, starfish, sea-urchin,

earthworm, crayfish, grasshopper, clam, slug, squid, dogfish, pigeon, rabbit. Laboratory note-books, certified by the instructor, should be submitted as evidence of the nature of the work, and should contain a full series of drawings and notes based on original dissections made by the student.

The practical work indicated above should be supplemented by such lectures or reading as will furnish a comprehensive knowledge of the groups studied. As a general reference book Parker & Haswell's Text-book of Zoology (Macmillan & Co., 1897) is recommended.

(1 unit)

12. Biology

A course of study and laboratory work extending through one school year, the time divided equally between two of the following subjects: Physiology, Botany, Zoology. The character of the work is indicated under the respective statements of subjects 9, 10, and 11. (1 unit)

13. Hygiene

The requirements in Hygiene are based on adequate instruction in personal hygiene, the hygiene of occupation, and the relation of the citizen to the State in matters of sanitation and public health. The course should give the student a basis for intelligently meeting his individual problems of health in any environment, rational habits of regular exercise, practical knowledge of general hygiene and sanitation, and familiarity with the real dangers of transmissible diseases and the methods of controlling them.

Six laboratory periods per week of physical training and experimental work on the hygiene of the individual and the home, and two recitations per week on Public Health throughout the year constitute the minimum requirements in this subject. A list of approved reference books will be furnished by the Department of Hygiene upon application.

Note.—In order to encourage the introduction of this subject without displacing other subjects in the High School curriculum, the following plan of distributing the work over several years of the course is suggested:

First Year.—(*a*) One physical training period three times per week; (*b*) one demonstration or field trip per week in the systematic study of personal hygiene.

Second Year.—(*a*) One physical training period three times per week; (*b*) one inspection trip per week in a prescribed study of the hygienic conditions of the various occupations.

THIRD YEAR.—(*a*) Gymnasium work and athletics optional; (*b*) two recitations per week on the principles of public health: this should consist of text-book work and carefully planned laboratory and field demonstrations. The class as a whole should construct a sanitary map of the community. (1 unit)

14-17. History

All candidates for credit in entrance History must submit evidence of considerable work done in addition to the text-book preparation. For the sake of the training involved, as well as for the information acquired and the stimulating of interest, the following exercises are recommended: Supplementary reading, including the use of original material where possible; notes and digests of reading; abstracts or analyses of specified chapters, both of the text-book and supplementary reading; outlines of subjects, gathering material from all available sources; map drawing from printed data or comparison of existing maps, showing movements of exploration, migration or conquest, territorial changes, or social phenomena.

Such work should be regarded as a means rather than the end of historical study, and in every instance should be adapted in character and amount to the stage of advancement of the class and of the individual pupil. As the pupil progresses in his study, more advanced work may well be required in the form of historical composition, and of note-taking in the class from talks by the teacher or reports of fellow pupils.

The evidence of such work may be presented in the form of a note-book or bound collection of notes, containing all exercises prepared upon any of the four history subjects arranged in order of their assignment and certified and approved by the teacher. In the case of schools whose recommendations are accepted in place of the examinations, a detailed statement by the teacher as to the character, amount, and quality of the work of each candidate may be submitted in place of the note-book itself.

14. Ancient History

Text-books: *The Oriental Nations*—Myers, General History, pp. 1-86; or West, Ancient History, pp. 1-75; or an equivalent. *Greece*—Botsford, History of Greece; or Myers, History of Greece; or Morey, Outlines of Greek History; or Oman, History of Greece; or West, Ancient History; or the equivalent. *Rome*—Botsford, History of Rome; or Myers, Rome; or West, Ancient History; or Morey, Outlines of Roman History; or an equivalent.

For supplementary reading and reference: Botsford, Story of Rome; Munro, Source Book of Roman History, "Epochs of Ancient History" Series; Wolfson, Essentials in Ancient History; Cox, General History of Greece (Student Series); Pelham, Outlines of Roman History; Abbott, Roman Political Institutions; Shuckburgh, History of Rome; Ginn & Co.'s Classical Atlas, or Kiepert, Classical Atlas; Tozer's Primer of Classical Geography. See, also, Historical Sources in Schools, and A History Syllabus for Secondary Schools. (1 unit)

15. Mediæval and Modern History

Text-books: Myers, Mediæval and Modern History; or Robinson, History of Western Europe; or, Harding, Essentials in Mediæval and Modern History; or the equivalent.

For supplementary reading and reference: Robinson, Readings in European History; West, Modern History; Duruy, History of the Middle Ages; Adams, Civilization During the Middle Ages; Bemont and Monod, Mediæval Europe; Munro and Sellvry, Mediæval Civilization; Fyffe, History of Modern Europe (Popular Edition); Seignobos, Political History of Europe since 1814; the "Epochs" Series; University of Pennsylvania, Translations and Reprints; Fling, Studies in European History; Putzger, Historischer-Schul-Atlas. See, also, Historical Sources in Schools. (1 unit)

16. History of England

Text-books: Andrews, History of England; or Coman and Kendall, History of England; or Cheyney, A Short History of England; or Gardiner, Student's History of England; or Ransome, Advanced History of England; or Larned, History of England; or Oman, History of England; or Walker, Essentials in English History; or Wrong, History of the British Nation; or Terry, History of England; or an equivalent.

For supplementary reading and reference: Bright, History of England; "Epochs" Series; Green, Short History of the English people; Traill, Social England; Larned, History for Ready Reference; Porritt, The Englishman at Home; Adams and Stephens, Select Documents of English Constitutional History; Colby, Sources of English History; English History Illustrated from Original Sources; Kendall, Source Book of English History; Translations and Reprints; and Gardiner, School Atlas of English History. Desirable references are to be found in Andrews, Cheyney, Coman and Kendall, Larned, and Wrong. See, also, Historical Sources in Schools; A History Syllabus for Secondary

Schools, and Reference Books recommended by the University of Wisconsin. (1 unit)

17. American History

Text-books: McLaughlin, History of the American Nation; or Channing, Students' History of the United States; and Ashley, American Government; or Hinsdale, American Government; or Clark, Outlines of Civics, and Bryce, American Commonwealth (abridged edition); or equivalents.

For supplementary reading and reference: "Epochs of American History" Series; the "American History" Series; Hart, American History Told by Contemporaries; MacDonald, Select Charters, Select Documents, and Select Statutes; and McCoun, Historical Geography of the United States. See, also, Historical Sources in Schools.

(1 unit)

18-19. Spanish and French

The requirements in Spanish and French are the equivalent of those recommended by the Committee on College Entrance Requirements of the National Educational Association.

The Elementary study of the languages, covering two years of daily recitations, should lay stress on the following points:

1. An accurate knowledge of the forms of the languages including the inflections, conjugations, and principal parts of verbs. Particular attention should be devoted to this part of the subject; constant drill in the verbal inflections, both written and oral, and dictation exercises of various kinds, are recommended. 2. The elements of syntax, such as the uses of the article, the personal pronouns, the subjunctive, the partitive constructions, and the agreement of the participles. 3. The ability to turn easy English prose into French or Spanish. 4. The ability to translate ordinary French or Spanish into idiomatic English. 5. The ability to pronounce French and Spanish correctly. It is believed that a fairly good pronunciation can be obtained in the fitting schools, if the necessary time is devoted to the subject. Pronunciation should be studied both theoretically and practically, and the characteristics of vowel qualities, of stress, pitch, and intonation should be pointed out.

The Intermediate requirements are intended to represent a third year of daily recitations. The specific demands are:

1. A thorough knowledge of modern French and Spanish syntax. 2. The ability to turn ordinary modern French and Spanish at sight into idiomatic English. 3. The ability to translate connected English

prose of moderate difficulty into French or Spanish. 4. The ability to write French or Spanish from dictation.

The Advanced requirements in French will occupy a fourth year of daily recitations. At the end of this course the student should be able: (1) To read at sight any standard author not earlier than the seventeenth century; (2) to write in French a short essay on some simple subject connected with the works read; (3) to translate correctly a passage of modern English prose; (4) to carry on a simple conversation in French; (5) to follow a lecture in French.

For all grades the examination will include a test of pronunciation and the writing of French or Spanish from dictation.

The reading in the Elementary course should cover from four hundred to six hundred duodecimo pages; for the Intermediate requirements a similar amount should be read of prose and verse, a portion to be in the dramatic form; and for the Advanced requirements the same quantity of prose and verse should be selected from standard authors not earlier than the seventeenth century, and these should be read with reference to their literary value.

The practice of writing compositions consisting in reproductions or paraphrases of the matter read should be begun in the Intermediate course and followed by short themes along similar lines in the Advanced course.

No definite text books are prescribed, but the books named below will be found adequate for the mastery of these requirements.

18. Spanish

a. Elementary.—Hills and Ford's Spanish Grammar (Heath & Co.), or Garner's Spanish Grammar (American Book Co.); Ramsey's Elementary Spanish Reader (Holt & Co.); Matzke's First Spanish Readings (Heath & Co.); Tamayo y Baus, Un Drama Nuevo (Jenkins, New York); Valdés, José (Heath & Co.); Alarcón, El Capitán Veneno (Heath & Co.). (2 units)

b. Intermediate.—Umphrey, Spanish Prose Composition (American Book Co.), or Ramsey's Elementary Spanish Text-book (Holt & Co.); Ramos y Vital, Zaragueta (Silver, Burdett & Co.); Caballero, La Familia de Alvareda (Holt & Co.); Alarcón, El Niño de la Bola (American Book Co.); Moratin, El Si de las Niñas (Ginn & Co.); Echegaray, El Gran Galeoto (Koehler, Boston). (1 unit)

19. French

a. Elementary.—Fraser & Squair's French Grammar and Reader, Part I (Heath & Co.), or Whitney's Practical French Grammar, Part

I (Holt & Co.), or Grandgent's Essentials of French Grammar (Heath & Co.), or Chardenal's Complete French Course (Allyn & Bacon), or François' Beginners' French (American Book Co.); Super's French Reader (Heath & Co.), or Aldrich & Foster's French Reader (Ginn & Co.), or François and Giroud's Simple French (Holt & Co.); Dumas, La Tulipe Noire; Halévy, L'Abbé Constantin; Labiche, Le Voyage de Monsieur Perrichon; Mérimée, Colomba. For the study of pronunciation, Matzke's Primer of French Pronunciation (Holt & Co.) is recommended. (2 units)

b. Intermediate.—Fraser & Squair's French Grammar and Reader, Part II (Heath & Co.), or Whitney's Practical French Grammar, Part II (Holt & Co.), or Edgren's Compendious French Grammar (Heath & Co.), or François' Advanced French Composition (American Book Co.); George Sand, La Petite Fadette; Balzac, Eugénie Grandet; Victor Hugo, Hernani (Heath & Co.); Fontaines, Historiettes Modernes (Heath & Co.). (1 unit)

c. Advanced.—Selected plays of Corneille, Racine, or Molière; La Fontaine, Fables. Selections from the writings of Rousseau or Voltaire; Lamartine, Grogiella; Hugo, Ruy Blas; Rostand, Cyrano de Bergerac; Renan, Souvenirs d'enfance et de jeunesse; selected works of Balzac, Maupassant, Daudet, and Anatole France; Modern French Lyrics. (1 unit)

20. German

The requirements in German are essentially those recommended to the National Educational Association by its Committee on College Entrance Requirements.

All candidates should present a statement from their former teachers of the amount of German read and the text-books used.

a. Elementary.—The ability to translate easy German prose and verse at sight; an accurate knowledge of the most important elements of grammar, embracing especially inflections, word-order, and the essentials of syntax, as also the ability to appreciate the force of prefixes and suffixes; the ability to translate easy prose from English into German; the ability to make oral use of the German learned and to recognize German words and simple sentences when spoken. Careful attention should be given to pronunciation and accentuation, in order to insure the power to read German fluently and intelligently.

This preparation is represented, approximately, *in reading*, by material of the character of Thomas and Hervey's Reader, and the careful study of one or more modern dramas (about two hundred duo-

decimo pages of easy German), supplemented by the reading of German lyrics and ballads, a number of which should be memorized; *in composition,* by an amount equivalent to the first twenty-six exercises in Harris's German Prose Composition. These exercises, the original work done by the student, followed by the corrected work approved by the teacher, should be written in ink and preserved for inspection by the Department. (2 units)

b. Intermediate.—The ability to translate ordinary German prose and verse at sight; some knowledge of word-formation and derivation; practical familiarity with the principles of syntax, with special reference to the uses of the tenses and cases, the modal auxiliaries, and the moods; the ability to translate into German simple connected English prose.

It is believed that this preparation can be acquired by the careful reading of five hundred duodecimo pages of contemporary and classical prose and verse, in addition to the reading required for Elementary German. It is recommended that about one-half of this reading be selected from the works of living or recent writers, such as Otto Ernst, Storm, Keller, Freytag, etc.; and the other half from such classics as Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, and Goethe's Wahrheit und Dichtung.

It is further recommended that particular attention be paid to the literary value of the works read. The preparation in translation from English into German should be the equivalent of what is represented by the first fifty pages of Jagemann's German Prose Composition. This work should be preserved in the manner suggested under Elementary German. It is also desirable that candidates should acquire the ability to understand and take part in a recitation conducted in German.

(1 unit)

c. Advanced.—A fourth unit in German may be given to candidates who fulfil, in addition to the preparation required in Elementary and Intermediate German, the following requirements: A firmer hold on the important elements of German grammar; a thorough knowledge of at least two of the following classics: Goethe's Hermann und Dorothea or his Iphigenia, Lessing's Nathan der Weise, and Schiller's Wallenstein, as well as of two or more recent dramas, all of which should be studied as much as possible with an eye to the appreciation of their literary value; some familiarity with the technical language of literature and science; the ability to compose in German with ease and to follow lectures delivered in German. (1 unit)

21. Latin

All candidates should present a statement from their former teacher of the amount of Latin read and the text-books used.

a. Elementary.—The requirements for Elementary Latin are as follows: 1. An accurate knowledge of the ordinary forms of the language. 2. The ability to pronounce Latin so as to observe the proper quantity of vowels. 3. A familiarity with the ordinary rules of syntax. Particular attention should be devoted to these three points. 4. The ability to translate easy Latin prose into English. 5. The ability to turn simple English sentences into Latin.

For 1908-09 the examinations in translation will be based on the first four books of Cæsar's Gallic War, but approved schools may use an equivalent Latin text. Some attention should also be paid to translation at sight from easy prose. (2 units)

b. Advanced.—The requirements for Advanced Latin include those for Elementary Latin, together with the following: 1. Continued training in Latin forms and syntax. 2. Knowledge of the rules of prosody, and ability to scan Virgil's hexameters. 3. The ability to translate from Cicero's Orations. 4. Careful preparation of the first, second, fourth, and sixth books of Virgil's Æneid, with less detailed knowledge of the third and fifth books. 5. The ability to turn into Latin connected English of simple style.

For 1908-09 the examinations in translations will be based on the Virgil assigned and on Cicero's Orations against Catiline, for Archias, and for the Manilian Law; but approved schools may use any equivalent Latin prose text, and are recommended to add Sallust's Catiline and other speeches of Cicero to the minimum given above. All schools should pay some attention to the translation of prose at sight, and the examination will include a passage from Cicero to test the ability of candidates in this respect. Credit in Advanced Latin is distributed as follows: Cicero, ½ unit; Virgil, ½ unit; Third-year Composition, ½ unit; Fourth-year Composition, ½ unit. (2 units)

22. Greek

a. Elementary.—Grammar, the inflections, the formation of words, and the essential points of syntax; Xenophon's Anabasis, Books I-IV, or an equivalent; prose Composition (Collar and Daniell's text-book is recommended); translation at sight of easy prose. It is expected of every student that he be able to read Greek aloud without stumbling. (2 units)

b. Advanced.—Homer, Iliad, Books I-III, or an equivalent; advanced prose composition. The candidate must show a thorough acquaintance with the forms and syntax of Homer, and must be able to scan any given passage exactly and to read it rythmically. In the writing of Greek the candidate should have a year's training beyond that required in Elementary Greek. (1 unit)

23. Freehand Drawing

The satisfactory completion of a course of instruction in freehand drawing which represents two hundred and forty hours of work.

Preparatory drawing should stimulate appreciation for the best pictorial and applied art, and give training in the technique of representation.

Instruction in applied art should include exercises in harmony of color as applied to room and furniture decoration and to dress; and the study of plant forms as adapted to decoration in some of the multiple every-day uses, as in programmes, advertisements, magazines, and the printing arts generally.

Representation should include the ability to represent groups of two or three colored objects, such as dishes, books, vegetables, machine parts, shells, leaf sprays and other organic forms. Representation of these should show knowledge both of the apparent *shapes of contours* and of the effects of *light and shade.*

The style of drawing should be direct, facile and effective, adapted to the thing drawn, with refinement in its proper place and vigor in its proper place. The candidate should be equally familiar with the use of pencil and charcoal or brush.

For the present, entrance credit will be given for a sufficient attainment in representative ability; but when this alone is offered, a higher standard of skill must be attained than when the instruction covers a broader field.

The candidate for examination should provide the kind of paper and materials which he is accustomed to use. (1 unit)

24. Mechanical Drawing

Full unit credit equivalent to about two hundred and fifty hours of work under instruction.

The candidate is expected to have acquired neatness and accuracy in the use of drawing instruments. His course should have included practice in line work, lettering, machine or architectural working drawings, and tracing; recognition, commensurate with the length of course and the degree of proficiency attained in the use of instruments, will

be given, however, to those courses consisting of line work, lettering, and the construction of geometric figures. He should present for inspection as much of his work as is possible, duly certified by his teachers. As an examination the candidate may be called upon to make a simple drawing of some specified object; he should provide his own material for the examination, as follows: T-square, triangle, instruments, pencils, eraser, scale, thumbtacks, and sheet of drawing paper not smaller than 12x18 inches. (½ or 1 unit)

Geometrical Drawing, representing one daily exercise during one school year, following the course in Freehand Drawing, may be offered as a substitute for Subject 24. The requirement calls for continuous training in the use of drawing instruments in the solution, by graphic methods, of such geometric problems as shall emphasize the necessity of accuracy and neatness. The course should be a general one, affording preparation for technical drawing in Engineering as well as for the purposes of business life.

25-28. Shopwork

Two things will be expected of candidates for entrance credit in these subjects; first, manual dexterity, as evidenced by neatness, accuracy, and dispatch in the execution of a given piece of work; second, a knowledge of the materials and tools used, and a thorough understanding of the principles involved in the operations.

Candidates who have been trained in manual training schools or in commercial shops should present letters from their teachers or employers stating clearly and in some detail the time they have been employed, the kind of work they have done, and its quality. The examination may be oral, written, the actual execution of a set piece of work, or all combined. In each subject the ability to read and follow a working drawing is expected.

25. Woodworking

The ability to recognize the common varieties of wood and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected. Candidates must be familiar with the uses of the principal hand tools of carpentry and with their care. They should be able to make the ordinary kinds of joints and splices. They should be familiar with the operation of the lathe, jig-, band-, and circular-saws, and planing machines.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop.

(½ unit)

26. Forge Work

This demands an elementary knowledge of the properties of wrought iron and steel, and of the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The candidate must be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to understand hardening, tempering, and annealing.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop.

(½ unit)

27. Foundry Work

The candidate should have a knowledge of the tools and processes used in the ordinary forms of green sand moulding and core work. He should be familiar with the cupola and know how to charge and operate it. He must have a knowledge of the properties of cast iron, and should have had experience in pouring cast iron as well as in moulding.

Equivalent to about two hundred hours under instruction in a manual training school, or a year in a commercial foundry.

(½ unit)

28. Machine Shop

A knowledge of the tools and processes used in the working of iron, steel, and brass is demanded of the candidate. He should be able to execute all forms of vise-work, such as chipping, filing, scraping, fitting, and finishing. He must be familiar, through experience in operation, with the simpler forms of machine tools, such as the lathe, drilling machine, planer, shaper, and milling machine.

Equivalent to about four hundred hours under instruction in a manual training school, or two years in a commercial shop

(1 unit)

29. Astronomy

An elementary course in General Astronomy as presented in any good modern text-book. (½ unit)

30. Biblical History and Literature

(1) The History of the Hebrews from the Establishment of the Kingdom to the Return from the Exile; (2) The Life of Jesus; (3) Old Testament Literature; (4) New Testament Literature. (1), (2), and either (3) or (4) will make up the unit of credit.

(½ or 1 unit)

31. Civics

The candidate should have such a knowledge of American government, national, state, and local, as may be derived from standard text-books, such as Ashley's American Government, Bryce's American Commonwealth (abridged), Clark's Outlines of Civics, Hart's Actual Government, or Hinsdale's American Government.

Special emphasis should be placed upon the actual working of institutions under the practical conditions of the party system. Evidence of collateral reading, with practical exercises and discussions, may be presented in the form of note-books or bound collection of notes; or, a detailed statement by the teacher as to the character, amount, and quality of the work of each candidate may be submitted in place of the note-book. (½ unit)

32. Economics

Either (1) a knowledge of the leading facts relating to the rise and growth of modern industry, with special reference to the industrial history of England and the United States; or (2) a knowledge of the fundamental principles of economic science as presented in a good elementary treatise on the subject. (½ unit)

33. Architectural Drawing

Elementary shades, shadows, and perspective. Thorough study of the forms of the Tuscan, the Greek Doric, the Ionic, and the Corinthian Orders. A knowledge of projections is required. The candidate should present a set of plates or drawings prepared by him at school, sufficient to demonstrate his understanding of the subject and his familiarity with instruments, including the use of the right-line pen; plates and drawings must be certified by the teacher. (1 unit)

34. Physical Geography

The candidate's preparation should include (1) The study of one of the leading secondary text-books in physical geography, that a knowledge may be gained of the essential principles and of well-selected facts illustrating those principles; (2) individual laboratory work, comprising at least forty exercises distributed about as follows: Mathematical geography, 5; ocean, 5; atmosphere, 12; land, 18.

A full outline of a progressive course of study with a list of laboratory exercises is given in Circular No. 35 of the College Entrance Examination Board. (1 unit)

35. Music

a. Musical Appreciation.—(1) A general knowledge of the principal

musical forms—song, classic dance, fugue, sonata (all movements), symphony—and of their historical development; (2) a general knowledge of the lives and environment of at least ten composers, including Bach, Mozart, Beethoven, Schubert, Chopin, and five of the following: Purcell, Handel, Gluck, Haydn, Cherubini, Weber, Rossini, Glinka, Mendelssohn, Schumann, Wagner, Verdi; (3) familiarity with certain designated works, as follows:

Bach: Prelude I and Fugue I from the Well-Tempered Clavichord; Gavotte from Sixth Violoncello Suite. *Handel:* Air with Variations ("The Harmonious Blacksmith"). *Haydn:* Largo from String Quartet (op. 74, No. 3). *Mozart:* Overture to "The Magic Flute"; Symphony in G Minor (entire). *Beethoven:* Sonata Pathétique (op. 13, entire); Larghetto from Second Symphony; Allegro con Brio from Fifth Symphony. *Weber:* Overture to "Der Freischutz". *Schubert:* Moment Musical in F Minor (op. 94, No. 3); Song, "The Erl-King"; Song, "Hark, Hark, the Lark." *Mendelssohn:* Scherzo from Midsummer Night's Dream"; "Spinning Song" (op. 67, No. 4). *Chopin:* Polonaise (op. 40, No. 1); Nocturne (op. 37, No. 2). *Schumann:* "Aufschwung" (op. 12, No. 2); Song, "Im Wundersch'nen Monat Mai." *Wagner:* Overture to "Tannhäuser"; Siegfried's Funeral March, from "Götterdämmerung."

The College Entrance Examination Board will hold a written examination covering (1) and (2). In (3) the candidate is expected to identify characteristic portions of the works set, when played by the examiner; and to give intelligent information concerning the form and character of the works themselves. The test does not require ability to perform, or to read from printed music. (1 unit)

b. Harmony. (1) The ability to harmonize, in four vocal parts, simple melodies of not fewer than eight measures, in soprano or in bass—these melodies will require a knowledge of triads and inversions, of diatonic seventh chords and inversions, in the major and minor modes; and of modulation, transient or complete, to nearly-related keys; (2) analytical knowledge of ninth chords, all non harmonic tones (including augmented chords).

The College Entrance Examination Board will hold a written examination adapted to the proficiency of those who have had one year's systematic training, with three hour-lessons a week, or its equivalent. It is recommended that systematic ear training (as to interval, melody, and chord) be a part of the preparation for this examination. Simple exercises in harmonization at the pianoforte are recommended. The candidate will be expected to have a full

knowledge of the rudiments of music, scales, intervals, and staff-notation, including the terms and expression-marks in common use. (1 unit)

c. Counterpoint.—The candidate should have had training in pianoforte-playing sufficient to enable him to render the Two-Part Inventions of Bach. The year's work should consist principally of written exercises on given or invented themes, as follows:

Chorals and melodies harmonized, with use of passing and ornamental tones; the several orders of Counterpoint in two, three, and four voices, with and without *cantus firmus;* elementary practice in Double Counterpoint; Imitative Counterpoint in the style of the simpler Two-Part and Three-Part Inventions and Choral Preludes of Bach; general analytical study of contrapuntal compositions of larger scope, including detailed analysis (both as to harmonic scheme and as to contrapuntal treatment) of not less than ten pages from at least four fugues of Bach's Well-Tempered Clavichord.

There should be some practice with the C clef, in reading and in writing. Familiarity with the alto and tenor clefs is especially desirable.

The College Entrance Examination Board will hold a written examination adapted to the proficiency of those who, having completed a year's study of Harmony, have also studied Counterpoint in a systematic course of three hour-lessons a week through one school year. (1 unit)

d. Performance.—(1) Pianoforte, (2) Voice, (3) Violin.—The College Entrance Examination Board will hold a written examination adapted to the proficiency of those who have had one year's systematic training with one hour-lesson a week, or its equivalent. The candidate should have acquired: A knowledge of the rudiments of music, scales, intervals, and staff notation, including the terms and expression-marks in common use; the ability to analyze the harmony and form of hymn-tunes and simplest pieces for the pianoforte, involving triads and the dominant seventh chord and their inversions, passing tones, and modulation to nearly-related keys; the ability to harmonize, on paper, in four vocal parts, melodic fragments involving the use of triads and the dominant seventh chord and their inversions, in major keys.

The test in performance will be determined in individual cases as the nature of the training may indicate. (1 unit)

36. Domestic Science

Study of foods; principles, processes, and chemistry of cookery;

bacteria and their relation to health and disease; dietics; household sanitation. Sewing and needlework in their various forms may also be included in the course. (1 unit)

37. Commercial Subjects

a. Bookkeeping.—A clear theoretical knowledge of the ordinary forms of business accounts and the various books and devices used in recording them, sufficient to enable the candidate to open, carry forward indefinitely, and close properly, by single or double entry, a set of books suitable for an ordinary mercantile house; training in computations and in handling the various forms of business paper essential to the work of an assistant bookkeeper; practical experience in performing the duties of a bookkeeper under the conditions and with the accessories of a modern business office. (1 unit)

b. Shorthand and Typewriting.—A good theoretical knowledge of one of the standard systems of shorthand writing and such practical skill in its use as will enable the candidate to take dictation for half an hour at an average rate of seventy-five words per minute; the ability to transcribe accurately and neatly, on the typewriter, ten simple business letters, of not less than one hundred words each, in one hour; familiarity with the methods and routine of a modern business office, and practical experience in performing the duties of stenographer and amanuensis. (1 unit)

c. Commercial History, Geography, and Law.—

Commercial History: The origin and growth of commerce in the various countries of the world; race and national characteristics, political and economic causes, laws, customs, means of transportation, prevailing trade conditions and policies affecting commercial development and activity.

Commercial Geography: Location and physical features, size and population, form of government and prevailing language of the important commercial countries of the world, the relative commercial activities of these countries, leading products, especially exports and imports, routes of travel and transportation, chief seaports and ocean or other routes by which these are connected with other trading ports of the world.

Commercial Law: A knowledge of those phases of the law that are of constant application in business life, including the drawing of contracts and other business documents. The ability to fill out or draw up in concise legal form any contract or agreement, check, note, bill of exchange, bill of sale, power of attorney, bill of lading, deed, mortgage, lease, notice of protest, or other document relating to business transactions. (1 unit)

A. Entrance Credit on Examination

Examinations in entrance subjects numbered 1-28 inclusive are held by the University in August-September.* Candidates will be admitted to these examinations on presenting evidence of systematic preparation in the subjects concerned. Applications should be made to the Registrar, by whom permits will be issued. Special examinations outside of the regular examination days will not ordinarily be granted. In exceptional cases such examinations may be arranged by the Committee on Admission; but a special fee of two dollars will be charged the candidate for each subject in which examination is taken. Examinations will not be offered in the subjects numbered 29-37 inclusive.

Specimen examination questions may be obtained on application to the Registrar.

Entrance examinations are held in the following order (for dates, see p. 5):

First Day:—Elementary Algebra, 8:15; Advanced Algebra, American History, 10:15; Plane Geometry, Botany, 1:30; Solid Geometry, 3:30; Trigonometry, 4:45.

Second Day:—Physiology, Elementary French, 8:15; Chemistry, Intermediate French, 10:15; English Composition, Advanced French, 1:30; Hygiene, English History, 3:30.

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*Candidates desiring examinations at the close of the school year are advised to take the June examinations of the College Entrance Examination Board. In 1908 these examinations will be held June 15-20.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form, to be obtained from the Secretary of the Board upon application. Applications for examination at points in the United States east of the Mississippi River, also at Minneapolis, St. Louis, and other points on the Mississippi River, must be received by the Secretary of the Board on or before Monday, June 1, 1908; applications for examination elsewhere in the United States, or in Canada, must be received on or before Monday, May 25, 1908, and applications for examination outside the United States and Canada must be received on or before Monday, May 11, 1908. Applications received later than the dates named will be accepted when it is possible to arrange for the examinations of the candidates concerned, but only upon the payment of $5 in addition to the usual examination fee.

The examination fee is $5 for all candidates examined at points in the United States and Canada, and $15 for all candidates examined outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board is published about March 1st of each year. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

In these examinations 60 will be considered as the lowest passing grade.

An outline of requirements in the various subjects in which examinations are held is given in Circular No. 35, issued by the Board. (Price, ten cents.)

The examination questions set by the College Entrance Examination Board are published in yearly volumes by Ginn & Co., Boston.

Third Day:—Physics, Elementary Spanish, 8:15; Intermediate Spanish, Elementary German, 10:15; Elementary English Literature, Intermediate German, 1:30; Advanced English Literature and History of English Literature, Advanced German, 3:30.

Fourth Day:—Zoology, Elementary Latin, 8:15; Biology, Advanced Latin, 10:15; Mediæval and Modern History, Elementary Greek, 1:30; Ancient History, Advanced Greek, 3:30; Drawing, Woodworking, Forge, Foundry, Machine Shop, by appointment, throughout the day.

Candidates are not required to take all the examinations at one time; but (unless following graduation from an approved school) account will not ordinarily be taken of an examination passed more than sixteen months before the proposed time of entering.

Satisfactory passing grades obtained in the regular entrance examinations of institutions of equivalent rank, or of the College Entrance Examination Board, will be accepted in subjects corresponding to those outlined in the entrance list.

B. Entrance Credit Without Examination

I. On Recommendation from Approved Schools

Entrance credit, without examination, will be granted to recommended graduates of approved preparatory schools, under the following conditions:

1. The candidate must complete the full high school course and be duly graduated after at least one year's attendance. Work previously done in other schools may be included in the Certificate of Record; but subjects taken with private tutors or under other than regular school conditions will be credited only on examination.

2. The time given to particular subjects and the amount of work covered must be substantially as indicated in the outline of entrance subjects. (Some flexibility in the time requirement is admissible; but the minimum for a unit of credit is one hundred and fifty recitation periods of forty five minutes each.) Candidates who have devoted less than the minimum time to a given subject must expect to receive entrance credit only on passing the regular entrance examination.

3. The grade of work must be satisfactory. The recommending grade may properly be fixed at about ten per cent above the lowest passing grade, with provision that lower passing grades in a particular subject or subjects may be offset by a general high average or by decided intellectual promise; but any recommending grade, fixed by the school, which insures a high standard of preparation will be respected

by the University. Where the candidate's work falls below recommending grade, entrance credit must be expected, in general, only after additional study and on passing the regular entrance examinations.

4. Graduates of approved preparatory schools specially recommended for distinguished scholarship or exceptional intellectual promise may be granted full undergraduate standing without regard to the requirements in particular subjects.

Approved preparatory schools are schools maintaining full four years' courses of high school work and accredited (1) by (a) The New England College Entrance Certificate Board, (b) The North Central Association of Colleges and Secondary Schools, (c) colleges and universities of recognized standing, or (2) upon inspection undertaken or authorized by the University. Schools which have sent five or more pupils to the University may be granted accrediting privileges upon the basis of the satisfactory record of such pupils.

Any subject in the entrance list may be credited without examination when it is evident that the requirements prescribed by the University have been fully met. In the newer subjects, where high school standards are not so well fixed, the University will usually prefer that the preparation offered be subjected to the test of examination. In Music this test will be the June examinations of the College Entrance Examination Board. English Composition, though listed separately, is intended to be taught in connection with English Literature; school credentials will not be considered in Composition (for credit without examination) unless at least three years' work in English has been completed. (Entrance credit in English Composition, on recommendation, does not exempt the student from English A in the University. See note, p. 40.)

It is the purpose of the University to emphasize (1) quality of preparation and intellectual promise; (2) personal character and seriousness of purpose. Principals are expected to exact a high standard of scholarship as preliminary to recommendation, and to withhold recommendation from those who are undesirable or unpromising from the point of view of moral qualities or habits.

Recommendations will be considered at any time of the year, but, since, in general, candidates cannot be assured of admission to the University without examination in one or more subjects, it is important that recommendations be forwarded as early as possible.

Blanks for admission on recommendation may be obtained from the Registrar.

II. On the Basis of Particular Credentials

Full undergraduate standing, without further tests, will be granted as follows:

(1) To holders of seventy-two-count Diplomas issued by the Regents of the State of New York (and sixty-count Diplomas issued prior to June 1, 1906). Beginning with June, 1909, this provision will be applicable only to diplomas granted *with credit, with great credit,* or *with highest credit.*

(2) To recommended graduates of the California State Normal Schools, and to graduates of other Normal Schools approved by the California State Board of Education as of equal rank with the State Normal Schools of California, who are holders of the highest grade diploma issued by these Normal Schools. (For conditions on which advanced standing may be granted Normal School graduates, see p. 65.)

(3) To candidates from China, Japan, Mexico, and other foreign countries who present credentials showing the satisfactory completion of courses of study equivalent to those of approved American high schools. In Japan such courses of study must extend at least two years beyond graduation from a middle school; in Mexico, graduation from the National Preparatory School or from other preparatory schools maintaining six years' courses, will be required. Before admission to the University such candidates must show ability to use, and to understand readily, both written and spoken English; if coming directly from these countries they must ordinarily expect to spend at least one year in an American preparatory school, or under special instruction in English, before being able to meet this test.

II. AS SPECIAL STUDENTS

Persons under twenty-one years of age will not be received as special students.

The privileges extended to special students are not intended for those who come directly from the schools, with insufficient preparation for regular standing, but for those who are qualified by age, character, practical experience, and habits of study to profit by university courses. (On account of the limitation upon the number of women students, women are not admitted as special students.)

Persons under twenty-five years of age, not graduates of some approved high school or equivalent preparatory school, will be admitted only upon passing entrance examinations in subjects aggregating at

least five units. The candidate may usually select the subjects in which examinations shall be taken, but engineering students must include elementary algebra and plane geometry.

Special students are subject to the same University regulations as regular undergraduates, and they may become candidates for graduation upon fulfilling all University requirements (see p. 70).

A failure on the part of any special student to maintain a good standing in the studies to which he is admitted will at once sever his connection with the University; and a special student suspended for failure in University work may be readmitted only upon attaining regular undergraduate standing.

Blank applications for admission as special students may be obtained from the Registrar.

III. TO ADVANCED STANDING

Students from other institutions of recognized collegiate rank, who present letters of honorable dismissal, may be admitted to such standing and upon such terms as the Faculty may deem equitable. Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit (ninety unit-hours toward graduation), and that differences in standard of entrance preparation will be taken account of. Every candidate is required to present, along with a catalogue of the institution in which he has studied, a full statement, duly certified, of the studies he has completed, including studies passed or credited at entrance.

Recommended graduates of approved State Normal Schools where the normal training has been preceded by a full four years' high school course, or where high school and normal school courses together cover six years' work, may be granted an advanced credit of not more than thirty units.

Blank applications for admission to advanced standing may be obtained from the Registrar.

All applications for advanced standing on the basis of work done before entering the University must be filed within two years after matriculation; and such applications will not be received at a later date.

IV. TO GRADUATE STANDING

Graduates of institutions of recognized collegiate rank, may be admitted to graduate standing in the University upon presentation of

diplomas or equivalent credentials. Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 78). If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than thirty units of University work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

UNIVERSITY RESIDENCE

Registration

On the appointed Registration Days, in August and January, each student must obtain a certificate of registration *in person,* at the Registrar's office.

Matriculated students may register after the appointed Registration Days and during registration week, upon payment of a special fee of two dollars; during the week following the fee for late registration will be four dollars; after that the fee will be increased one dollar for each week's delay. Registration of undergraduates and specials will not be permitted later than one month after the beginning of instruction.

Study Card

At the Registrar's office the student receives a card for selection of studies for the semester. This card, properly filled out, and approved by the major department, must be filed with the Registrar not later than the Friday following Registration Day; but late study cards will be accepted upon payment of a special fee of two dollars. Students registering after the Friday of registration week, must have their study cards indorsed by all the instructors under whom work is taken. All work for which University credit is desired must be duly registered.

Enrollment in Classes

A student desiring to enter any class must present his certificate of registration to the instructor for enrollment at the beginning of each semester. Whether the student is qualified for enrollment in any particular class is a question to be decided by the instructor in charge. In general, the prerequisites for taking any given course are noted under "Courses of Instruction."

Change of Studies

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the Committee on Registration a petition for such change, approved by the major department and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, if they do not give the student too many unit-hours, or too few unit-hours, and if presented within one month after the beginning of the semester, are granted without question. If presented at a later time in the semester

they will be granted only for extraordinary reasons, and, where the taking up of new subjects is involved, only on payment of a special fee of two dollars for each course; if otherwise acceptable but presented after the close of the semester, they will be granted only on payment of a special fee of four dollars for each course. In the case of petitions to drop subjects during the last six weeks of the semester, action will be deferred until the close of the semester.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the departments in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject. (First-year students may change their major subject at the end of the first or second semester without petition.) In general, the major subject may be changed at the end of the first year, and in some cases later, without appreciable loss of time to the student.

Amount of Work

Fifteen hours per week of recitations or lectures or an equivalent in laboratory work, constitutes an average semester's work. In general, students may register for as few as *thirteen* or as many as *eighteen* unit-hours; but in the case of students doing outside work for self-support or otherwise, and where considerations of health are involved, special restrictions will be made upon recommendation of the professor of hygiene; and where conditions or failures have been incurred in the preceding semester, not more than *fifteen* units may be registered unless by special permission of the Committee on Registration granted in advance. Permission to register for less than *thirteen* units may also be granted for special reasons; but registration for less than *ten* units will not ordinarily be accepted. Not more than eighteen units may be credited toward graduation for any semester's work, unless, in exceptional cases, permission to register for additional units is granted in advance. Graduate students are not held to any special number of unit-hours, but registration will not ordinarily be permitted unless such students are prepared to devote at least half of their working time to University study. Petitions for irregular registration should be presented at the beginning of the semester.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one semester. Thus, in lecture or recitation work, for one unit of credit one hour per week may be allotted to the lecture or recitation and two hours for preparation or subsequent reading and

study on the part of the student; but if a less amount of time is allotted for preparation or subsequent reading or study, there shall be a proportionate decrease in the amount of credit. Where the time is wholly occupied with drawing, field, or laboratory work, or in the class-room work of conversation classes, three full hours per week through one semester are expected of the student for each unit of credit; but where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in the actual drawing, field, laboratory, or class-room time as seems just to the department concerned.

Conditions and Failures

A student conditioned in any subject may arrange with the instructor concerned for such supplementary examinations or study as will make good the deficiency; but such deficiency must be removed within one year after the condition is incurred, otherwise the condition will be considered a failure. Work reported as incomplete may be made up during the first or second semester's registration after the incomplete is incurred; but if not made up until the second semester, the incomplete work shall be duly entered on the student's study card and shall count as part of the permitted registration for that semester to the extent of the actual unit-hours required for making up such incomplete work as estimated by the instructors concerned. A student failing in any subject cannot receive credit for the portion in which the failure is incurred until the subject has been re-registered and taken over again in class. A condition or failure or withdrawal from class without permission of the Committee on Registration, limits the student to *fifteen* units the semester following.

Mid-semester reports on scholarship are obtained from all instructors, and students reported as doing unsatisfactory work are notified of their deficiencies. A student whose work is unsatisfactory may be placed on probation, and may be required to withdraw at any time thereafter if satisfactory improvement is not shown.

A student who at the end of his first semester receives passing grades in less than half the work for which he is registered thereby forfeits his membership in the University and will be required to withdraw for the period of one semester, unless by reason of illness or other disability such action may be modified by the Committee. A first-semester student whose deficiencies are serious, but involving not more than half of the work registered, will receive notice of the unsatisfactory nature of his work and be placed on probation for the period of one semester. At the end of any subsequent semester a

student who receives passing grades in less than two-thirds of the work for which he is registered thereby forfeits his membership in the University and will be required to withdraw for the period of one semester, unless by reason of illness or other disability or previous good record, such action may be modified by the Committee. In this connection work marked "incomplete" will be considered of passing grade only when reported as satisfactory in quality and not seriously deficient in quantity.

A student re-entering the University after a period of compulsory withdrawal may take tests to remove "incompletes" and "conditions" incurred during his last semester, but no credit will be granted for any other work accomplished during the period of withdrawal, except after removal of "incompletes" and "conditions" and on special examination by the departments concerned. A student so re-entering will be placed on probation for one semester. In case of a second failure withdrawal from the University will be permanent, unless, under extraordinary conditions, a further trial may be granted by the Committee. During the period of compulsory withdrawal a student may not attend University exercises, nor remain in residence at the University, except by special permission of the Committee.

A first application for leave of absence for the remainder of any collegiate year will not be refused on the ground of delinquent scholarship; but a student seriously deficient in scholarship at the time of taking such leave will be placed on probation on returning to the University and a subsequent compulsory withdrawal will be permanent, unless, under extraordinary conditions, a further trial may be granted by the Committee. No credit will be granted for work done during the semester in which leave of absence is taken. Application for leave of absence under the above conditions will not be granted during the last six weeks of the second semester; nor at any time to students who have previously been under compulsory withdrawal on account of delinquent scholarship.

A student on probation may not take part in any inter-collegiate contest, nor represent the University in any way, whether individually or in connection with any athletic, literary, musical, dramatic, or other organization.

From Special to Regular Standing

Special students may be entered in regular standing and become candidates for graduation, on passing examinations in the required number of entrance subjects, provided such examinations are passed not later than two years after matriculation. In place of entrance ex-

aminations, university work to the amount of five units for each entrance deficiency may be offered in university subjects which are also included in the entrance group.

A special student who has completed one hundred and fifty units of university work, including all major requirements, and whose general university record is deemed proof of superior scholarship, may become a candidate for graduation on approval of the Committee on Admission and Advanced Standing. Petitions to this end will not be considered by the Committee until after the student has completed one hundred and twenty units of university work.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra entrance subjects are also university subjects, and are successfully continued in the University within two years after matriculation, and provided the student's general University record is deemed proof of superior scholarship. In general, three units of advanced credit will be granted for each extra entrance unit representing elementary work in a given subject, and five units of advanced credit for each extra entrance unit representing advanced work. Applications for such university credit must be made within two years after matriculation. After matriculation additional entrance units may be offered only for the purpose of making up entrance deficiencies.

University Credit for Special Courses

University credit is given only for work done in residence at the University. Work prescribed by any professor of such a nature that it cannot be done at the University or can be more advantageously done elsewhere may be regarded as work done in residence. But such special work must be duly registered in advance.

Matriculated students on leave of absence may take work in other universities, usually without any restrictions other than those imposed by the university in question. But work undertaken in any Summer Session may be subject to special regulations, and must be approved in advance by the major department and by the department in which the work is to be taken; and the last semester's work of every candidate for a degree must be taken in this University.

Advanced Standing

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, except as provided above for

extra entrance units, or, in particular cases, to recommended graduates of approved State Normal Schools (see p. 65). But in special cases permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Application for such examinations, with satisfactory evidence of the work accomplished, must be presented to the Committee on Advanced Standing. Applications for advanced standing on the basis of work done before entering the University must be made within two years after matriculation.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness, the petition must be indorsed by the professor of hygiene. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more semesters may re-enter at the beginning of any semester without formal petition.

Honorable Dismissal

An honorable dismissal means that the student is permitted voluntarily to withdraw from the University and is commended to the favorable consideration of any institution he may wish to enter. An honorable dismissal may be granted upon written application to any student not under discipline for misconduct.

Conduct of Students

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

Expenses of the Student

Tuition and Registration Fees

The Constitution of the State of California, as amended November 6, 1900, authorizes the Legislature, under certain conditions, to exempt the property of the University from taxation, provided residents of California are charged no fees for tuition unless such fees shall be authorized by the Legislature. An Act of the Legislature, approved February 14, 1901, "exempting from taxation a portion of the property

held in trust for the benefit of the Leland Stanford Junior University," as amended in March, 1907, provides "that while this Act is in force no fees shall be charged residents of this State for tuition, except that such fees may be charged in professional and engineering courses, but no such fees shall be charged to any student who is registered in any such courses when this Act takes effect."

Tuition fees are charged in Law, to all students not registered in the department of Law on March 6, 1907, as follows: for students registering for thirteen or more units in law in any semester, *twenty-five dollars* per semester; for students registering for less than thirteen units in law for any semester, *two dollars* per unit per semester. (No tuition fee will be charged for Law courses 1, 34, and 35.)

Graduate students in Law and Engineering, and all undergraduates, are charged a registration fee of *ten dollars* per semester; special students, *fifteen dollars* per semester. But these registration fees are waived in the case of *bona fide* residents of California who have been resident in the State at least one year immediately preceding registration. Students in laboratory courses pay for the materials which they use, and in various courses syllabus fees are charged. Laboratory and syllabus fees are different for the different courses, ranging from *fifty cents* to *twenty-five dollars* per semester.

Cost of Living

The cost of living in Roble Hall, including board, room, light, heat, and attendance, averages about twenty-seven dollars per month. Students furnish their own linen, blankets, and towels. Rooms may be reserved in advance by making a deposit of two dollars.

Rooms in Encina Hall, furnished similarly to those in Roble Hall, but without board, cost from $6.00 to $6.50 per month, with two in a room. There are a few single rooms at $8.00 per month. Students occupying a double room alone pay the full price of the room. Each double room is furnished with two single beds. Rooms may be reserved in advance by making a deposit of two dollars.

Students may live outside the Halls only in places approved by the University.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board, in private houses, can be obtained, at from twenty-five to thirty dollars per month. A considerable number of students live in co-operative clubs, in which the cost of board and room is reduced as low as eighteen dollars per month; such rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern

Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. Carriages connect with all trains at Palo Alto.

On arriving at the University, new students may obtain information as to rooms and board at the Information Bureau conducted by the Christian Associations at the Palo Alto station and at the University. A complete list of approved rooms and boarding places will be provided. Particular inquiries may be addressed to the secretaries of the Christian Associations.

The University Inn, located near the Quadrangle, has dining accommodations for about three hundred students.

Books and stationery will average from eighteen to twenty-five dollars per year.

The necessary expenses of the student, exclusive of clothing and railway fares, range from $300 to $450 per year.

Memorial Scholarship

The Leland Stanford Junior Scholarship, established by Mrs. Stanford, in 1900, pays the necessary expenses of its holder throughout the undergraduate course. The present holder of the scholarship is Mr. R. Justin Miller, of Hanford, California.

Self-Support of Students

A considerable number of students manage, in one way or another, to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line of office and laboratory assistance, personal services of numerous kinds, the management of various student enterprises, agencies for laundries, etc.

The Student Employment Bureau (in charge of the Christian Associations) registers without charge all students who apply for employment, and supplies employers with student labor as demanded. In general, the demand and supply are nearly equal, but the attention of new students who intend to earn the whole or part of their living is called to the following results of past experience:

1. There is a constant *over-supply* of those wishing to do teaching and clerical work. None but those having superior qualifications and experience are likely to secure employment the first semester.

2. There is a considerable demand for efficient stenographers; also for men and especially women students who can do domestic labor of any kind; board and room rent may be earned by waiting on table, washing dishes, general housework, house cleaning, gardening, etc.

3. Students who can do any kind of domestic or manual labor *well,*

and who have thoroughly good health, can earn their board by three hours' work per day, or board and room by four hours' work per day. Those who are bookbinders, printers, mechanics, or carpenters, will have a decided advantage in obtaining employment. *But no student should come to the University without resources sufficient for the expenses of one semester.*

4. The University curriculum is adapted to those who have control of their entire time for study. The student who must earn his living, therefore, should expect to take less than the usual amount of University work.

5. No student should come expecting to earn money, who can do nothing well; skill is absolutely essential, as competition is quite as severe in the college community as elsewhere.

6. Opportunities for earning money during the summer vacations can usually be counted on, the demand for canvassers being most constant.

Particular inquiries concerning opportunities for self-support should be addressed to the Secretaries of the Christian Associations. Upon arrival at the University new students should report for registration and information to the Information Bureau of the Associations.

University Health Control

The University exercises an advisory control over student health affairs through the Committee on Public Health, whose Chairman is the University Health Officer.

Every student upon entering the University is required to report to the University Health Officer for a brief medical examination. General health, eyesight, hearing, and evidence of effective vaccination are the important factors in the examination. Any condition which may place a limitation on the amount or kind of work planned by the student is referred to the Committee on Public Health for such action as may be deemed necessary.

Students intending to train for any of the athletic teams, or to register for gymnasium work, are required to pass a careful physical and medical examination at the beginning of each semester.

A careful inspection of all boarding and rooming houses in the community is carried out under the supervision of the Public Health Committee, and only those are permitted to register who arrange to live in houses which have been approved.

All students are entitled to medical consultation and to individual advice in other matters directly or indirectly relating to their health, at any time during the year; but no treatment is undertaken by the University.

Students' Guild

Provision for the care of all cases of serious illness is made by the Guild, which is a student organization now thoroughly equipped for its work. A hospital is owned and operated through the management of a Board of Directors composed of students and members of the faculty. Complete operating-room facilities and isolation-wards have been provided. The hospital is in charge of an executive nurse, with an adequate nursing and house-keeping staff.

All students are required to become members of the Guild by paying the fee, which for 1907-08 is two dollars each semester. A uniform hospital rate of one dollar per day is charged all members of the Guild.

The officers of the Guild for 1907-08 are as follows: President, George Clifford Coe; Vice-President, Katharine Whitney Barnes; Secretary, Everett St. John Dunbar; Treasurer, John Eldridge Cushing; Board of Directors: The Officers, Professors Snow, Griffin, and Swain.

GRADUATION

Candidates may present themselves for graduation in January, May, and September.

No degree will be conferred upon any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

Bachelor of Arts

The degree of Bachelor of Arts (A. B.) is conferred upon candidates who have satisfactorily completed a total of one hundred and twenty units of University work and who have also satisfied the requirements in major and minor subjects.

Thirty units constitute a normal year's work (see p. 68), but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, without regard to the time spent, except that at least thirty units (including the last fifteen) must be completed in this University.

Each student selects as his major subject or specialty the work of some one department. This department has the authority to require the completion of this *major* subject, and also of such *minor* subjects in other departments as may be considered necessary or desirable collateral work. Such major and minor requirements taken together will not (except in the departments of applied science) exceed forty units of University work, or one-third of the student's time during his undergraduate course.

A course in English Composition (English A) is a prescribed study for first-year undergraduates who do not satisfy the matriculation test.

With these exceptions, all the undergraduate work in all departments is elective. The student may freely choose for such elective work any subject taught in the University, which his previous studies have prepared him to undertake.

The department in charge of the major subject of any student is expected to act as adviser to the student in educational matters, and the recommendation of the department is necessary to graduation.

(A student in regular undergraduate standing who does not intend to become a candidate for the A. B. degree, may choose, with the

approval of the major department, any courses in the University which his previous training has prepared him to undertake.)

Candidacy for Advanced Degrees

Every applicant for an advanced degree must file at the Registrar's office not later than the beginning of the semester preceding that in which the degree is sought, a formal application including a statement of the proposed course of study. This application must be approved by the department faculty concerned, and upon acceptance by the Committee on Graduation the applicant is admitted to candidacy for such advanced degree. It is advisable that such application be made as early as possible in the student's course. Where a thesis is required it shall be upon a subject approved by the department and, if for the doctor's degree, shall be presented in its final form, to the Chairman of the Committee on Graduate Study, at least six weeks before the close of the semester in which the degree is sought. Accepted theses for the master's degree shall be bound in a uniform style and deposited in the University Library. No advanced degree will be conferred except upon the recommendation of the Committee on Graduate Study.

Master of Arts

The degree of Master of Arts (A. M.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion, in residence, of one year of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, and on the presentation of an approved thesis, or the passing of a satisfactory examination, or both. At least two-thirds of the year's work required of the candidate is to be devoted to the major study. Work done in the University outside of the requirements for the degree must be registered, but will not be taken into account in connection with the degree.

Special regulations are as follows:

1. A report upon the character of the work done will be made by each instructor under whom a candidate is registered.

2. Some evidence of ability to do independent work is required of every candidate. In addition, therefore, to examination, a thesis is expected, unless such evidence is furnished in other ways.

Engineer

In the departments of applied science the professional degree of Engineer is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satis-

factory completion, in residence, of one year of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and on the presentation of an approved thesis, showing ability to do independent work.

Juris Doctor

The degree of Juris Doctor (J. D.) is conferred upon students who have previously received the academic degree of Bachelor of Arts, or its equivalent, upon the completion of a three years' professional law course as defined by the Department of Law.

Doctor of Philosophy

The degree of Doctor of Philosophy (Ph. D.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. The degree is given only on the ground of advanced scholarship and the ability to do independent work in some special line, and not for merely faithful study for a prescribed time or course, nor for miscellaneous study. Three years represents the minimum time in which the degree can be obtained, and often a longer period of study will be necessary.

2. Graduate work done elsewhere may be accepted in place of resident study in this University; but in no case will private study without sufficient guidance, or pursued at a distance from libraries or laboratories or other necessary facilities, be accepted as an equivalent; and no degree will be granted to any person who has not spent at least the last year of such study in residence at this University.

3. All candidates will be required to show a reading knowledge of French and German, and this requirement must be fulfilled at least one year before the final examinations for the degree. The candidate's ability to read his special literature in these languages shall be tested by the faculty of the department in which the major subject is taken.

4. The course of study shall embrace one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the course of study; except that such minor subjects may be waived on the recommendation of the department in which the major subject is taken and with the approval of the Committee on Graduate Study, when the breadth and extent of the candidate's train-

ing justify such a course,—in which case the candidate will be expected to show such breadth of training in his oral examinations.

In the nature of the case the work offered as minors cannot always be graduate work, but it should be advanced work and should, whenever possible, be planned as part of the course leading to the Ph. D. degree. If the work has been done before the student enters this University it shall be passed upon by the department in which it would have been done if taken here. This department is free to test the candidate as it sees fit.

5. The candidate must present a thesis of such a character as shall display power of original and independent investigation and constitute an actual contribution to knowledge. He must guarantee the printing of the thesis, in a form approved by the Committee on Graduate Study, within one year after the degree is conferred, and must deposit one hundred copies in the University Library.

6. The candidate must sustain final written examinations in major and minor subjects conducted by the department in which the study was taken and also shall submit to an oral test or examination by the special Examining Committee of the Faculty.

The special Examining Committee shall consist in each case of (1) the professor in charge of the major subject, (2) the one or more professors in charge of the minor subjects, (3) two members of the Committee on Graduate Study whose departments lie nearest to that of the major professor, and (4) the Chairman of the Committee on Graduate Study, acting as its secretary.

The High School Teacher's Certificate

County, and City and County Boards of Education are authorized to grant High School Certificates (under Sections 1521, 1775, and 1792 of the Political Code of California) to candidates recommended by the University as having fulfilled the requirements laid down by the State Board of Education, and provided the institutions concerned "shall each certify to the high character of the work accomplished under its direction, and to the personal fitness of the candidate."

The requirements laid down by the State Board of Education will be met by accomplishing the work outlined in either of the following groups:

Group I

1. Graduation from a college requiring not less than eight years of high school and college training.

2. One year of graduate study in a university belonging to the

Association of American Universities, part of the time at least being devoted to one or more of the subjects taught in the high school.

3. Eight hours per week for one-half school year in the Department of Education, taken as a part of either the graduate or undergraduate course.

4. Practical teaching, equivalent to at least four hours per week for one-half school year, in a well-equipped school of secondary grade directed by the Department of Education of any of the universities belonging to the Association of American Universities, or in a school of grammar or secondary grade in connection with a California State Normal School, or under the direction of the Department of Education of the University of California, or of the Leland Stanford Junior University.

Group II

1. Graduation from a college requiring not less than eight years of high school and college training.

2. One-half year of graduate study in a university belonging to the Association of American Universities, part of the time at least being devoted to one or more of the subjects taught in the high school.

3. (*a*) Graduation from a California State Normal School or other normal school officially recognized by the State Board of Education as of equivalent grade; *or* (*b*) twenty months' experience with decided success as a regular teacher or as principal in any reputable school, elementary or secondary; *or* (*c*) six months as student teacher in a well-equipped school of secondary grade directed by a California State Normal School, or its recognized equivalent, or in a school of grammar or secondary grade in connection with a California State Normal, or under the direction of the Department of Education of the University of California, or of the Leland Stanford Junior University.

The University Recommendation

In addition to the technical requirements prescribed by the State Board of Education the University will require, as preliminary to any recommendation for the teacher's certificate, the completion of enough work (and of sufficiently high grade), in at least one subject, to secure a Department recommendation that the candidate is fitted to teach the subject in high school classes.

The Department requirements for such recommendation are, in most cases, stated in the Register under the Department headings; but each candidate *should find out definitely* from the Departments concerned,

not later than the beginning of the Senior year, preferably earlier, the particular requirements which must be met.

It is advisable that every candidate for the teacher's recommendation should endeavor to fulfil the Department requirements in at least *two* high school subjects.

For information and advice as to possible and desirable combinations of subjects for high school positions, students are invited to consult the Secretary of the Committee on Recommendation of Teachers.

Recommendation of Teachers

The University undertakes (1) to keep a record of students and graduates who wish to teach, or to be transferred to other teaching positions, and (2) upon application of Boards of Education, School Trustees, or other officials, to recommend for suitable vacancies such candidates as seem most likely to succeed.

The University does not solicit positions for its graduates, and reserves the right to refuse to recommend candidates enrolled. Information received from University instructors and others regarding the fitness of candidates is regarded as confidential, and general letters of recommendation are not given.

Blanks for registration may be obtained of the Secretary, at the Registrar's office. They should be filled out each year, preferably during March or April.

PART III

ANNOUNCEMENT OF COURSES

COURSES OF INSTRUCTION

For 1908-09

GREEK

Augustus Taber Murray, Professor.
Henry Winchester Rolfe, Associate Professor.
Edward William Hope, Instructor.
With the co-operation of Professor Fairclough and other members of the Department of Latin.

Undergraduate Courses

Instruction in the lower classes is given chiefly by means of recitations, but as the student advances these are supplemented by lectures.

It will be seen that provision is made for those who have had no Greek before coming to the University.

The Teacher's Recommendation.—Courses 2, 3, 4, 5, and 17 constitute the minimum requirement for the high school teacher's recommendation in Greek.

1. Elementary.—Grammar; translation of easy prose; Greek composition. After the essential grammatical forms have been mastered, passages of continuous prose are taken up for translation, and, as soon as is practicable, the Anabasis. The student is made familiar with the ordinary forms of syntax, and exercises in writing Greek are regularly introduced. This course does not count as a part of the major work for students in Greek.

3 units, both semesters (Murray)

2. Xenophon, Plato, and Lysias.—Selections from Xenophon's Memorabilia, with Plato's Apology, and selections from Lysias. Open to those who have offered subject 22 on entrance, or who have completed course 1 in the University. M. W. F. 8:15

3 units, 1st semester (Hope)

3. The Odyssey and Herodotus.—A continuation of course 2. Selections from the Odyssey and from Herodotus. M. W. F. 8:15

3 units, 2d semester (Hope)

4. Prose Composition and Sight Translation.—Simple prose is taken up for sight-reading, and the exercises are based upon the text

read. Required of Greek major students in connection with courses 2 and 3. T. Th. 8:15 2 units, both semesters (HOPE)

5. Syntax.—Lectures and exercises on Greek syntax, treated from a practical rather than a theoretical standpoint.
1 unit, 1st semester (HOPE)

6. Geography.—The geography of the Greek world, and the geographical ideas of the Greeks. 1 unit, 2d semester (HOPE)

7. Homer. -A critical study of the Iliad, with discussions and papers on Homeric topics. Prerequisites: courses 2 and 3, or an equivalent. M. W. F. 11:15 3 units, 1st semester (ROLFE)

8. Euripides, Lucian, etc. -The Alcestis of Euripides, selections from Lucian, and selections from the Lyric Poets. A continuation of course 7. M. W. F. 11:15 3 units, 2d semester (ROLFE)

9. Prose Composition and Sight Translation.—Selections for translation from the historical and philosophical writers; practical exercises in Greek composition. Prerequisite: course 4, or an equivalent. Required of major students before graduation. T. Th. 8:15
2 units, both semesters (ROLFE)

10. History of Greece. A general outline course. Open to first-year students. M. W. F. 8:15 3 units, 1st semester (ROLFE)

11. Greek Religion, Mythology, and Ritual.—Lectures with stereopticon. [Not to be given in 1908-09.]
3 units, 1st semester (ROLFE)

12. Greek Art. With especial reference to Sculpture and Vase Paintings. Lectures, with stereopticon. M. W. F. 8:15
3 units, 2d semester (ROLFE)

13. Private Life of the Greeks. Lectures, illustrated by stereopticon. M. W. 1:30 2 units, 2d semester (HOPE)

14. Greek Tragedy.—The Prometheus of Aeschylus, the Antigone and Electra of Sophocles, and the Hippolytus and Iphigenia Taurica of Euripides. Other plays are assigned for private study, and lectures on the drama are from time to time given. [Course 14, alternating with courses 15 and 16, will not be given in 1908-09.]
3 units, both semesters (MURRAY)

15. Plato and Demosthenes. The Phædo and the De Corona. M. W. F. 11:15 3 units, 1st semester (MURRAY)

16. Thucydides. Books VI and VII, the Sicilian Expedition. M. W. F. 11:15 3 units, 2d semester (MURRAY)

17. Teachers' Course.—Lectures and practical exercises. M. W. 1:30 2 units, 1st semester (HOPE)

18. Bucolic Poetry.—Selected Idylls of Theocritus, Bion, and Moschus and the Eclogues of Virgil are read and interpreted. [Students completing this course will receive one unit credit in Greek and one in Latin; not given in 1908-09.]

2 units, 2d semester (FAIRCLOUGH)

19. Greek Testament.—A study of the Book of Acts, with selections from the Epistles. T. Th. 10:15

2 units, both semesters (HOPE)

20. Lyric Poetry.—Selections from the Lyric poets, with accompanying lectures. 2 units, 2d semester (FAIRCLOUGH)

21. General Lectures.—A series of lectures on various phases of Greek and Roman civilization. Open to all students. Those who do prescribed reading may obtain two credits instead of one. [See Latin 30; not given in 1908-09.]

1 unit (two lectures weekly), both semesters
(MURRAY, with the co-operation of other instructors)

22. Introductory.—An introduction to the study of the Greek language, based largely upon the Greek element in English, and leading to the rapid reading of Mark's Gospel. Open to all students.

3 units, 2d semester (MARTIN)

GRADUATE COURSES

The center of the Graduate work is the Greek Seminary—made up of the director and such students as satisfy him of their fitness for the work. The Seminary meets weekly for the critical interpretation of some Greek author, the different members, in turn, filling the post of interpreter. Topics for investigation are assigned, and papers prepared by the members are read and discussed.

Members of the Seminary are expected to supplement their critical work by wide reading, and lectures on the author or authors under discussion are given by the director. It is in the highest degree desirable that all members of the Seminary should be able to read both French and German.

23. The Greek Seminary.—In 1908-09 the Seminary will be occupied with the study of Aeschylus. The text of the Agamemnon will be taken up for critical study. Lectures on ancient tragedy, with particular reference to the art of Aeschylus, will accompany the work of the Seminary. (Students should provide themselves in advance with

the Oxford text of Aeschylus and with the special editions of the Agamemnon by Sidgwick, Wecklein, Enger-Plüss and Verrall.) M. 2:30-4:30 2 units, both semesters (Murray)

24. Rapid Reading.—Graduate and advanced students will meet weekly for the rapid reading of select Greek tragedies. W. 2:30 1 unit, both semesters (Murray)

25. The Greek Theatre.—Lectures and discussions, open also to advanced undergraduates. 1 unit, both semesters (Hope)

Special Lectures

Throughout the year Professor Murray gives lectures, twice weekly, on Greek Epic and Dramatic Poetry. These lectures are intended for general literary students, and do not presuppose a knowledge of Greek; they do not count as part of the major work for students in Greek.

26. The Greek Epic.—T. Th. 10:15 2 units, 1st semester (Murray)

27. Greek Tragedy.—T. Th. 10:15 2 units, 2d semester (Murray)

LATIN

Henry Rushton Fairclough, Professor.

Jefferson Elmore, Benjamin Oliver Foster, Ernest Whitney Martin, Assistant Professors.

With the co-operation of Professor Murray, Associate Professor Rolfe, and Instructor Hope of the Department of Greek.

Undergraduate Courses

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome.

The Teacher's Recommendation.—Students who complete twenty units of the work accepted as part of the major requirements in Latin, including two courses of Prose Composition, and in addition the Teachers' Course in Latin, may receive a recommendation from the Department to teach Latin as a minor subject.

1. Virgil and Cicero.—Virgil, selected books of the Æneid; Cicero, selected orations; exercises in Latin composition. This course is planned for those who have passed in entrance subject 21*a*. Course

1 does not count as major work for students in Latin. M. W. F. 9:15
3 units, both semesters (MARTIN)

2. Terence, Cicero, and Horace.—Terence, Andria; Cicero, De Senectute; Horace, Odes and Epodes. Open to students who have completed course 1, or who have offered entrance subject 21*b*. Three sections. M. W. F. (I) 8:15, (II) 9:15, (III) 10:15
3 units, both semesters (FAIRCLOUGH, ELMORE, FOSTER, MARTIN)

3. Terence, Cicero, and Selections.—Terence, Andria; Cicero, De Senectute; selections from legal writers. Intended for non-majors who cannot devote more than four unit-hours to Latin. Not open to Latin majors. T. Th. 10:15 2 units, both semesters
(FAIRCLOUGH, MARTIN)

4. Prose Composition I.—Open to those taking course 2, and required of all major students in Latin. One hour each week will be devoted to class-room work in composition; for the other hour the class will be divided into small groups which will meet with an instructor for practical exercises and rapid reading of easy prose. T. Th. 9:15 2 units, both semesters (FOSTER, ELMORE, MARTIN)

5. Horace.—Satires and Epistles. Open to those who have completed course 2 or 3. Attention is directed especially to the style and subject matter, to Horace's influence upon later literature, and to the salient features of the Augustan age. M. W. F. 10:15
3 units, 1st semester (ELMORE)

6. Livy and Tacitus.—Selections from Livy's History and the Annals of Tacitus. This course, complementary to course 5, involves a survey of Roman history and the literature of the early empire. M. W. F. 10:15 3 units, 2d semester (ELMORE)

7. Prose Composition II.—Open to students who have taken course 4. T. Th. 9:15 2 units, both semesters (FAIRCLOUGH)

8. Roman Comedy.—The Trinummus of Plautus and the Adelphoe of Terence. Attention is paid to the early forms, constructions, and metres, and to the staging of a Roman play, with some consideration of the differences in style and dramatic art between the two playwrights. T. Th. 10:15 2 units, 1st semester (FOSTER)

9. The Letters of Cicero.—The aim is to get a view of Cicero and his times from the original sources, to ascertain the causes for the breaking down of the Republic, and to become familiar with official procedure in the judicial and legislative bodies. Special attention is paid to the style of the letters. T. Th. 10:15
2 units, 2d semester (ELMORE)

10. Pliny and Seneca.—Selections from the works of the younger Pliny and Seneca. T. Th. 8:15 2 units, 1st semester (MARTIN)

12. Lucretius.—Selections from the De Rerum Natura are read with particular attention to the philosophic thought and its poetic treatment. W. 1:30-3:30 2 units, 2d semester (FAIRCLOUGH)

13. Prose Composition III.—A course for advanced students. [Not given in 1908-09.]

1 unit, both semesters (FAIRCLOUGH)

14. Juvenal and Martial. -Selections from the Satires of Juvenal and the Epigrams of Martial, with supplementary reading in other writers of the first century. T. Th. 8:15

2 units, 1st semester (ELMORE)

15a. Quintilian.—Book X. Rhetoric and literary criticism among the Romans. T. Th. 9:15 2 units, 1st semester (ROLFE)

15b. Roman Literature.—Illustrative selections from various writers will be read by the class. T. Th. 9:15

2 units, 2d semester (ROLFE)

17. Teachers' Course. Lectures on methods of teaching Latin, with practical exercises. Open only to advanced students. M. 2:30-4:30

2 units, 2d semester (ELMORE)

18. Roman Law. -This course, based upon the Commentaries of Gaius, deals with the leading principles and history of Roman Law, and its survival in modern times. Open to all who have some knowledge of Latin, and intended especially for students in Law. [Not given in 1908-09.] 2 units, 1st semester (FAIRCLOUGH)

19. Cicero's Philosophical Works. Lectures upon the life and career of Cicero with especial reference to his work in philosophy. Selections from the De Natura Deorum, Tusculan Disputations, and other philosophical works will be read. T. Th. 8:15

2 units, 2d semester (MARTIN)

20. Roman History from the Sources. [Not given in 1908-09.]

2 units, 1st semester (FOSTER)

21. The Roman Novel. The Cena Trimalchionis of Petronius, and the story of Cupid and Psyche from the Golden Ass of Apuleius. [Not given in 1908-09.] 2 units, 2d semester (FOSTER)

GRADUATE COURSES

These courses are open to graduates in Latin who have had at least two years' undergraduate work in Greek. The ability to read French

and German is also very desirable, and, in the case of candidates for the degree of Ph. D., necessary. The aim of the courses is to give the student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

22. **Latin Seminary.**—In 1908-09 the Seminary will be devoted to a study of the plays of Terence. F. 2-4
2 units, both semesters (Fairclough)

23. **Roman Elegy.**—Selections from the Corpus Tibullianum, Propertius, and Ovid, accompanied by lectures on the development of elegiac poetry among the Greeks and Romans. T. 1:30-3:30
2 units, both semesters (Foster)

24. **Introduction to Latin Palæography.**—Lectures and practice in reading fac-similes of manuscripts. [Not given in 1908-09.]
(Fairclough)

25. **Introduction to Latin Epigraphy.**—Lectures and readings in the Corpus Inscriptionum. 1 or 2 units, 2d semester (Martin)

26. **Grammar.**—Lectures on the sounds and inflections of Latin. [Not given in 1908-09.] 2 units, 1st semester (Foster)

27. **History of Classical Studies.**—Lectures. M. 11:15
1 unit, 2d semester (Elmore)

Special Courses

29. **History of Rome.** A general course, open to all students. [Not given in 1908-09.] 3 units, 2d semester (Elmore)

30. **General Lectures.**—A series of lectures on various phases of Greek and Roman civilization. Open to all students. [Not given in 1908-09.] 1 unit (two lectures weekly), both semesters
(Fairclough, with the co-operation of the other instructors)

31. **Roman Art and Monuments.**—A survey of the topography, architecture, sculpture and other art-forms of ancient Rome and the provinces, illustrated with lantern-slides. This course, illustrative of Roman history and literature, is intended mainly for major students in Latin. Others must receive special permission from the instructor before registering. T. Th. 11:15
2 units, 1st semester (Fairclough)

32. **Roman Private Life.**—Lectures, with illustrations from ancient

art and other sources. Open to all, but of special importance to Latin students. [Not given in 1908-09.]

2 units, 1st semester (MARTIN)

33. Roman Political Institutions.—Lectures and assigned reading on the development and operation of the most important features of the Roman government. Open to all students. T. Th. 9:15

2 units, 2d semester (ELMORE)

34. Religion and Worship of the Romans.—Lectures and assigned readings. Open to all but first-year students. T. Th. 11:15

2 units, 2d semester (FOSTER)

GERMANIC LANGUAGES

GEORGE HEMPL, JAMES OWEN GRIFFIN, Professors.
KARL G. RENDTORFF, WILLIAM ALPHA COOPER,* MACY MILLMORE SKINNER, Assistant Professors.
GEORGE HENRY DANTON, Acting Assistant Professor.
BRUNO BOEZINGER, HERMANN HILMER, Instructors.

The advanced courses are intended primarily for those students who are candidates for the degrees of Master of Arts and Doctor of Philosophy; but special consideration is also given to the needs of those who intend to make the teaching of German their profession. Graduate work in the Germanic languages is facilitated by the opportunities offered by the library of the late Professor Hildebrand of Leipzig, which contains a rich and well chosen collection of works on German philology and literature.

The attention of all students of German is called to the course in the history of Germany, given as course 12 in the Department of History. This course should be taken as early as possible.

Students who intend to teach German are expected to take at least courses 3, 6, 7, 8, 13*b*, 14, 22, and either 9, 10, or 11. See also the notes to courses 2, 7, 13, and the note above course 9.

1. Elementary.—It is the object of this course to put the learner in possession of the elements of the German language. This implies: (1) a personal command of simple German, that is, the ability to understand such German whether heard or read, and to employ the language in simple conversation, narration, and description, both orally and in writing; (2) such a ready familiarity with the elements of German

* Absent on leave, 1908-09.

grammar as is essential for the attainment of this command of the language. Daily (I) 8:15, (II) 9:15, (III) 10:15, (IV) 11:15
5 units, both semesters (SKINNER, DANTON, BOEZINGER, HILMER)

2. Second-year German. (See note below.)

a. Reading.—Texts suitable for the second year; for the most part, the writings of contemporary authors. M. W. F. (I) 8:15, (II, III) 9:15, (IV) 10:15, (V) 11:15 3 units, both semesters
(GRIFFIN, SKINNER, DANTON, BOEZINGER, HILMER)

b. Reproduction and Composition, oral and written.—This work is based largely on the German read in *2a* and is correlated with a thorough review of the elements of the grammar. T. Th. (I) 8:15, (II) 9:15, (III) 10:15, M. F. (IV) 1:30 2 units, both semesters
(HEMPL, GRIFFIN, DANTON, BOEZINGER)

Note.—Students expecting to continue the study of German beyond the second year must first have completed both *2a* and *2b*. See also the notes to courses 7 and 13.

3. Classical German Drama.—This course aims chiefly to be an introduction to the spirit of the classical German drama; but throughout the course an effort is also made to familiarize the student, by means of various selected readings, with the life and character of the German people. M. W. F. (I) 8:15, (II) 10:15
3 units, both semesters (GRIFFIN, RENDTORFF)

4. Modern German Drama.—Lectures in connection with the interpretation and rapid reading of some of the more important works of the modern dramatists. T. Th. 8:15
2 units, both semesters (GRIFFIN)

5. Modern German Novels.—The reading of standard modern novels, with lectures on the development of the novel. T. Th. 9:15
2 units, both semesters (SKINNER)

6. Advanced German Grammar.—A systematic presentation of the important facts of German grammar, together with individual investigations of the usage of various writers. T. Th. 1:30
2 units, both semesters (HEMPL)

7. German Composition.—(I) M. W. 9:15, (II) T. Th. 9:15, (III) T. Th. 11:15 2 units, both semesters (BOEZINGER, HILMER)

Note.—Students taking course 7 are expected to have had thorough training in English composition, and such as show lack of ability in this direction will not be permitted to continue in the work.

8. Advanced Composition.—M. W. 8:15
2 units, both semesters (RENDTORFF)

Note.—Students wishing to take up any of the three following courses (9, 10, 11) will be expected to have such preparation as can be obtained by pursuing courses 3 and either 4 or 5.

9. Lessing.—Lectures on Lessing's life and times, with reading and discussion of his principal works. M. W. F. 11:15
3 units, both semesters (DANTON)

10. Schiller.—Lectures on his life, together with interpretation and discussion of his writings. M. W. F. 10:15
3 units, both semesters (SKINNER)

11. Goethe.

a. Lectures on Goethe's life and works, and reading of selected poems. [Not given in 1908-09.]
3 units, both semesters (COOPER)

b. Faust, Part First and Part Second. [Not given in 1908-09.]
3 units, both semesters (COOPER)

13. The History of German Literature.—Lectures and readings.

a. From the earliest times to the eighteenth century. T. Th. 8:15
2 units, both semesters (RENDTORFF)

b. The eighteenth and nineteenth centuries. [Not given in 1908-09.]
2 units, both semesters (RENDTORFF)

Note.—Students electing course 13 are expected to have pursued a general course in the history of English literature and to be able to read German with facility.

14. Teachers' Course.—Lectures on the various methods employed in teaching modern languages, together with practical advice in the matter of conducting classes. T. 2:30-4:30
2 units, 2d semester (HEMPL)

15. The Genesis of Grammar. Lectures on the origin and development of the parts of speech and of other grammatical apparatus [Not given in 1908-09.] 2 units, 1st semester (HEMPL)

16. Middle-High German. Grammar and selected texts (first semester); Walter von der Vogelweide (second semester). M. W. 9:15
2 units, both semesters (RENDTORFF)

17. Old-High German. [Not given in 1908-09.]
2 units, both semesters (HEMPL)

18. Old Norse.—F. 2:30-4:30
2 units, both semesters (HEMPL)

19. Gothic.—[Not given in 1908-09.]

2 units, both semesters (HEMPL)

20. The Runes.—Lectures on the origin and development of the primitive Germanic alphabet. T. 2:30-4:30

2 units, 1st semester (HEMPL)

21. The History of German Civilization.—This course is intended for students of German who wish to become acquainted with the development of German civilization in its relation to German literature. T. Th. 10:15 2 units, both semesters (RENDTORFF)

22. The History of Germany.—[See course 12 in the Department of History.]

ROMANIC LANGUAGES

JOHN ERNST MATZKE, Professor.
OLIVER MARTIN JOHNSTON, Associate Professor.
COLBERT SEARLES, CLIFFORD GILMORE ALLEN, ALBERT LÉON GUÉRARD, Assistant Professors.
ERNEST GEORGE ATKIN, Instructor.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, several of the advanced courses are conducted as much as possible in the language which forms the object of study.

The Department recognizes two classes of major students: (1) students who expect to teach French or Spanish and who wish to take up the study from the point of view of the specialist; (2) students who desire to group a course of study of a general nature around that of French or Spanish.

Either French or Spanish may be selected as a major subject. In French the minimum requirement consists of courses 2, 4, 5, 6, 7, 8, 9, 10, and 11. In Spanish the same requirement includes courses 13, 14, 15, 16, 17, 18, 19, and 20.

In addition major students who intend to teach either French or Spanish will be expected to take Latin 1, 2, and 4, German 1 and 2, and Elementary French or Spanish or Italian.

The Teacher's Recommendation.—The minimum requirement for the High School recommendation is as follows: in French—courses 2, 3, 4,

5, 7; in Spanish—courses 13, 14, 15, 16, 17, 19. The Department will insist also on courses 24 and 25. Recommendations will be given only on the vote of the Department, and will demand a degree of scholarship above the ordinary passing mark.

1a. Elementary French.—Fraser and Squair, French Grammar, with written and oral exercises and systematic training in French pronunciation on the basis of Matzke's Primer of French Pronunciation; Aldrich and Foster's French Reader. M. W. F. (I) 8:15, (II) 9:15, (III) 11:15

3 units, both semesters (JOHNSTON, SEARLES, ATKIN)

1b. Elementary French, Reading Course.—The course is intended for students who merely desire to obtain a reading knowledge of the language, and does not prepare for the more advanced courses in the Department. Whitney, A Brief French Grammar; Matzke's Primer of French Pronunciation; Aldrich and Foster's French Reader; Dumas, La Tulipe Noire. M. W. F. 10:15

3 units, both semesters (SEARLES)

[Courses 1*a* and 1*b* are open to all, but students desiring to enter after the end of the second week will be admitted only upon special examination.]

2. Modern French Syntax.—François, Advanced French Prose Composition. Open to students who have completed course 1*a*, or who have received credit for entrance subject 19*a*. (I) T. Th. 9:15, (II) M. F. 11:15 2 units, both semesters (JOHNSTON, SEARLES)

3. Modern French Reading. Dow and Skinner, Quelques Contes des Romanciers Naturalistes; Victor Hugo, Quatre-vingt-treize; Balzac, Le Curé de Tours; Victor Hugo, Hernani; Rostand, Cyrano de Bergerac. Open to students who have completed courses 1*a* or 1*b*, or who have received credit for entrance subject 19*a*. [The section meeting at 10:15 will be open only to students selecting course 2, or having completed it, and will be devoted to more special study of syntax in connection with the reading. The remaining sections are intended to give general opportunity for obtaining a more perfect reading knowledge of the language.] (I) M. W. 8:15, (II) T. Th. 10:15, (III) T. Th. 11:15 2 units, both semesters (SEARLES, ATKIN)

4a. French Conversation.—There will be three meetings of the class during the week, for which one unit of credit will be given toward graduation. Open to students who have completed course 1, or who have received credit for entrance subject 19*a*. M. W. F. 10:15

1 unit, both semesters (GUÉRARD, ATKIN)

4b. French Pronunciation.—Practice in French pronunciation with the phonograph, required for one semester of all students registering for course 4*a*, unless excused by the instructor, and open to others likely to profit by such practice as far as the limitations of time and space will permit. 1 unit, either semester (GUÉRARD, ATKIN)

[Courses 2, 3, and 4 constitute the second year's work in French, and should, if possible, be taken during the same year. Course 4 may not precede course 2.]

5. Advanced French Prose Composition. — Translation into French of selected English prose. Open to students who have completed course 2, or its equivalent. M. W. 11:15
2 units, both semesters (GUÉRARD)

6. French Themes.—The course will be conducted in French. Open to students who have completed courses 2, 3, 4, and 5, or their equivalent. F. 11:15 1 unit, both semesters (GUÉRARD)

7. Classical French.—A study of the principal authors of the classical period. Representative texts will be read from the works of Corneille, Racine, Molière, Voltaire, Le Sage, La Fontaine, and Boileau. Open to students who have completed courses 2 and 3, or their equivalent. M. W. F. 9:15 3 units, both semesters (JOHNSTON)

8. History of French Literature from the Renaissance to the Romantic Movement.—Lectures, supplemented by reading and reports by the members of the class. Students will need Kastner and Atkins, A Short History of French Literature (Holt & Co.), and Lanson, Histoire de la Littérature Française (Paris, Hachette). Open to students who have completed courses 2 and 3, or their equivalent. T. Th. 10:15 2 units, both semesters (SEARLES)

9. History of French Literature in the Nineteenth Century.—Lectures, with reading of the principal authors and reports by the members of the class. Students should provide themselves with Pellisier, Le mouvement littéraire au XIXe siècle (Paris, Hachette, 1889.) Open to students who have completed courses 7 or 8. T. Th. 11:15 2 units, both semesters (MATZKE)

10. Jean-Jacques Rousseau.—A study of Rousseau, his philosophy and influence. The course will be conducted in French. Open to students who have completed courses 2, 3, and 4, or their equivalent. T. Th. 9:15 2 units, 1st semester (GUÉRARD)

11. French Lyric Poetry in the Nineteenth Century. —Fonsny and Van Dooren, Poètes Lyriques Français. The course will be conducted

in French. Open to students who have completed courses 2, 3, and 4, or their equivalent. T. Th. 9:15

2 units, 2d semester (GUÉRARD)

12. The French Historians.—Study of the French Historians from Villehardouin to Sorel, their conception of history, their method and their style. Special attention will be devoted to the study of Michelet. Jeanroy, Extraits des Chroniqueurs Français; Jullian, Extraits des Historiens Français du XIXe siècle; Seignobos, Extraits Historiques de Michelet; Taine, Introduction à l'Histoire de la Littérature Anglaise. M. W. 9:15 2 units, both semesters (GUÉRARD)

13. Elementary Spanish.—Loiseaux, An Elementary Grammar of the Spanish Language; Loiseaux, Spanish Composition; Matzke, First Spanish Readings; Alarcón, Novelas Cortas Escogidas. Open to all. M. W. F. (I) 8:15, (II) 9:15, (III) 10:15

2 units, both semesters (ALLEN, ATKIN)

14. Modern Spanish Syntax.—Ramsey, A Text-book of Modern Spanish; Umphrey, Spanish Prose Composition. Open to students who have completed course 13, or who have received credit for entrance subject 18*a*. M. W. 11:15 2 units, both semesters (ALLEN)

15. Modern Spanish Reading.—Moratín, El Sí de las Niñas; Alarcón, El Sombrero de Tres Picos; Zorrilla, Don Juan Tenorio; Becquer, Legends, Tales and Poems; Taboada, Cuentos Alegres; Tamayo y Baus, Un Drama Nuevo. Open to students who have completed course 13, or who have received credit for entrance subject 18*a*. T. Th. 11:15 2 units, both semesters (ATKIN)

16a. Spanish Conversation. There will be three meetings of the class during the week, for which one unit of credit will be given toward graduation. Open to students who have completed course 12, or its equivalent. M. W. F. 9:15 1 unit, both semesters (ALLEN)

16b. Spanish Pronunciation.—Practice in Spanish Pronunciation with the phonograph, required for one semester of all students registering for course 16*a*, unless excused by the instructor, and open to others likely to profit by such practice as far as the limitations of time and space will permit. 1 unit, either semester (ALLEN)

[Courses 14, 15, and 16 constitute the second year's work in Spanish, and should, if possible, be taken during the same year. Course 16 may not precede course 14.]

17. Advanced Spanish Composition.—Translation into Spanish of selected English prose. Open to students who have completed course 14, or its equivalent. T. Th. 10:15 2 units, both semesters (ALLEN)

18. Spanish Themes.—The course will be conducted in Spanish. Open to students who have completed courses 14, 15, 16, and 17, or their equivalent. [Not to be given in 1908-09.]

1 unit, both semesters (————)

19. Classical Spanish.—Cervantes, Don Quijote; Alarcón, La Verdad Sospechosa; Lope de Vega, Amar sin saber á quién; Tirso de Molina, El Burlador de Sevilla; Calderón, La Vida es Sueño, El Alcalde de Zalamea; La Vida de Lazarillo de Tormes; Ford, A Spanish Anthology. Open to students who have completed courses 14 and 15. T. Th. 11:15 2 units, both semesters (ALLEN)

20. History of Spanish Literature.—Lectures, with reading of important works and reports by the members of the class. Students should provide themselves with Butler Clarke's Spanish Literature (Macmillan & Co., New York). Open to students who have completed course 19 or its equivalent. [Not to be given in 1908-09.]

2 units, both semesters (ALLEN)

21. Elementary Italian. — Grandgent, An Italian Grammar; Bowen's First Italian Readings; Manzoni, I Promessi Sposi. Open to all. M. W. F. 10:15 3 units, both semesters (JOHNSTON)

22. Advanced Italian.—Dante, La Divina Commedia. Translation course open to students who have completed course 21. T. Th. 10:15

2 units, both semesters (JOHNSTON)

23. Dante and the Divine Comedy.—Lectures, open to juniors and seniors in all departments. [Not to be given in 1908-09.]

2 units, 2d semester (JOHNSTON)

[Courses 22 and 23 will be given in alternate years.]

TEACHERS' COURSES

24. Phonetics.—Lectures on the organs of speech and the nature and formation of speech sounds with special reference to the pronunciation of French. Intended particularly for teachers of language. Open only to advanced students.

2 units, 1st semester (MATZKE)

25. Teachers' Course in French.—Lectures on methods of teaching French, study of the available text-books and practical exercises in teaching French. Open only to advanced students.

1 unit, 2d semester (MATZKE)

[Courses 24 and 25 are given in alternate years; they will not be given in 1908-09.]

Graduate Courses

Courses of instruction for graduate students in Romanic philology and literature lead to the degrees of Master of Arts and Doctor of Philosophy and are planned for the benefit of specialists, particularly of such as are intending to become teachers of the Romanic languages. Admission to regular standing in this department presupposes an undergraduate curriculum of study which has included Latin and French, and has afforded proficiency in at least one of the principal languages of the Romanic group (French, Spanish, or Italian). In addition to this, a good reading knowledge of German (for purposes of advanced study) is requisite.

26. History of Old French Literature.—Lectures on the history and development of French Literature from the beginning to the end of the fifteenth century. M. W. 2:30

2 units, both semesters (Matzke)

27. French Historical Grammar.—Lectures on Old French Phonology and Morphology. Students should provide themselves with Nyrop, Grammaire Historique de la Langue Française (Paris, Picard). One hour every week will be given up to practical philological exercises based on Paris's edition of La Vie de Saint Alexis (Paris, Vieweg, 1903) and Suchier's edition of Aucassin et Nicolete (Schöningh, Paderborn, 1903). M. W. F. 1:30 3 units, both semesters (Matzke)

28. Old French Texts.—Translation of Old French texts from Bartsch, Chrestomathie de l'Ancien Français, revue par Horning (Leipzig, Vogel, 1901). T. Th. 1:30

2 units, both semesters (Matzke)

29. Seminary.—In 1908-09 the Seminary will take up the study of Boileau. F. 2:30 2 units, both semesters (Matzke)

30. Journal Club.—The instructors in the Department and the advanced students meet regularly on alternate Thursdays for the discussion of the periodicals and new books. Th. 2:30

ENGLISH LITERATURE AND RHETORIC

Melville Best Anderson, Alphonso Gerald Newcomer, Professors.
Raymond Macdonald Alden, Samuel Swayze Seward, Jr., Howard Judson Hall, Lee Emerson Bassett, Henry David Gray, William Dinsmore Briggs, Assistant Professors.
John Kester Bonnell, Theresa Peet Russell, Instructors.

Requirements for the Degree of Bachelor of Arts

a. The courses in Chaucer, Shakspere, Milton (or Wordsworth), History of English Literature from the beginning to 1798 (31 and 32), besides such preliminary courses in vocal training, composition, or literature as may be requisite in each individual case.

b. English History. Students entering credited with Entrance Subject 16 are considered as having fulfilled this requirement.

c. A sound knowledge of at least one foreign language and its literature—ordinarily interpreted as requiring a minimum of 16 units in the chosen language, not including Latin 1, German 1, or French 1.

In general, students are encouraged to include among their elected studies Latin or Greek (not less than two years; or, in case Latin or Greek be selected to meet requirement *c* above, one modern foreign language), Anglo-Saxon, and a course in science, with laboratory work.

The Teacher's Recommendation.—Recommendation for the Teacher's Certificate in English is granted only by vote of the department on the basis of approved scholarship, and upon the completion of a certain amount of prescribed work. The undergraduate courses to be usually prescribed are, in the Department of English Literature, Vocal Expression, Composition, Prosody, Shakspere, Milton, Teachers' Course, and one course in the history of literature, and, in the Department of English Philology, Anglo-Saxon and Chaucer. For the work in their year of graduate study candidates are expected to advise with both departments.

Preliminary and General Courses

(Open to all students unless otherwise specified.)

A. Elementary Composition.—A one-semester course required of all first-year undergraduates except those who show themselves entitled to exemption. T. Th. (I) 8:15, (II) 9:15, (III) 10:15, (IV) 11:15
1 unit, either semester (Bonnell, ————)

1. Principles of Vocal Expression.—A general course in vocal training, the use of the voice in reading and speaking, and the elements of interpretative reading, with practice in the preparation and delivery

of short speeches. (I) M. W. F. 9:15, (II) M. W. F. 10:15, (III) M. W. F. 1:30 3 units, either semester (BASSETT, BONNELL)

2. English Composition. -Practical work in narration and description, first semester. Practical work in exposition, second semester. T. Th. (I) 8:15, II, III) 9:15, (IV) 10:15, (V) 11:15
2 units, both semesters (GRAY, BRIGGS, RUSSELL)

2a. English Composition.—The first part of course *2*, offered as a one-semester course. T. Th. 10:15 (first semester), 8:15 (second semester) 2 units, either semester (NEWCOMER, HALL)

2b. English Composition.—The second part of course *2*, offered as a one-semester course. T. Th. (I) 8:15, (II) 9:15
2 units, either semester (SEWARD, HALL)

3. Note Taking.—Practice in the taking of notes, both from lectures and reading, and in the preparation of abstracts and summaries. Th. 8:15 1 unit, either semester (SEWARD)

4. Modern English.- *a*. The spoken language (first semester). Lectures on the relation of English to other tongues, the history and character of its vocabulary, standards of pronunciation, etc. *b*. The literary language (second semester). Lectures on English syntax, idiom, style, and the vocabulary of literature and literary criticism T. 8:15 1 unit, both semesters (NEWCOMER)

5. Prose Classics.—For 1909, a study of Malory's Le Morte Darthur, with collateral reading in the Mabinogion. M. W. 9:15
2 units, 2d semester (NEWCOMER)

6a. Types of Poetry. A study of the nature, methods, and varieties of poetry, the elements of poetic form, and the elements of poetic criticism; designed for students who intend to pursue advanced work in literature. M. W. F. 10:15 3 units, 1st semester (GRAY)

6b. Introduction to Poetry. The reading and interpretation of poetry; designed more especially for students not pursuing a literary course. M. W. F. 10:15 3 units, 1st semester (ALDEN)

7. Humor and Satire. An analysis and classification of the forms of humor, with special reference to its place and influence in English literature. The second semester will be devoted especially to satire and satirists. Lectures with illustrative reading. Not open to first-year students. M. W. F. 11:15
3 units, both semesters (RUSSELL)

9. The English Bible.—Representative books of the Bible studied as literature, with (1) some general account of the Bible in its en-

tirety, (2) a grouping of the various books according to their form, and (3) a study of certain extended passages in each one of these forms, especially of those which have had the widest influence on English literature. M. W. F. 10:15

3 units, 2d semester (GRAY)

10. Shakspere.—A close study of half a dozen plays and the more rapid reading of others. Discussions twice a week of the plays selected for study (for 1908-09, A Midsummer-Night's Dream, Richard II, Romeo and Juliet, Twelfth Night, Macbeth, Coriolanus), together with weekly lectures by Professor ANDERSON on these and the plays assigned for reading. Not open to first-year students. Lec. (all sections) W. 2:30, Rec. Th. (I) 9:15, (II) 10:15, (III) 11:15

3 units, both semesters

(ANDERSON, NEWCOMER, HALL, GRAY)

ADVANCED AND SPECIAL COURSES

I. Vocal Expression

(Course 1 prerequisite.)

14. Vocal Interpretation.—*a.* Lyric poetry (first semester). Practice in the oral rendering of selections from the English poets of the nineteenth century. Designed particularly for students who intend to teach English literature.

b. Dramatic Literature (second semester). A careful analysis of two or three plays of Shakspere. Members of the class will vocally interpret characters and scenes assigned for individual study. T. Th. 10:15

2 units, one or two semesters (BASSETT)

15. Public Speaking.—Practice in the preparation and delivery of speeches, with attention to the style of spoken discourse based on a study of masterpieces of oratory. Prerequisite: courses 1 and 2. T. Th. 11:15 2 units, both semesters (BASSETT)

II. Written and Oral Expression

(Course 2 prerequisite.)

21. Advanced Composition.—Including both rapid writing and the preparation of long themes. T. Th. 9:15

2 units, both semesters (HALL)

22. Narration.—The principles of invention and style in their practical application to narrative art. Open by recommendation from course 2. T. 1:30 1 unit, both semesters (ALDEN)

24. Argument.—Practice in the preparation and presentation of

material in expository and argumentative form, with some study of models. Open to a limited number of students. T. Th. 11:15
3 units, 1st semester (Briggs)

25. **Oral Debate.**—Practice in the preparation and delivery of oral arguments, chiefly on current public questions. Open to a limited number of students who have taken, or are taking, course 24, to be admitted in the order of application. W. 2:30-4:30
2 units, both semesters (Alden, Duniway, Bassett)

28. **Teachers' Course in English.**—A study of the methods of teaching Composition (first semester) and Literature (second semester) in secondary schools. Open to students in senior year. W. 1:30-3:30
2 units, both semesters (Seward)

III. History and Interpretation of Literature

(Courses 2 and 6*a* should, whenever contributory, precede the election of the following courses. The courses are designed more particularly to meet the needs of students of the English Department, but may be elected by others who have fulfilled the requirements in each individual case. Courses 33, 37, and 45 are well adapted to the needs of the general student, and for these course 6*a* will not be insisted upon as a prerequisite.)

31. **Early History of English Literature.**—*a*. From the beginning to 1557 (English Philology 3, first semester). *b*. From 1557 to the Restoration, 1660 (second semester). Open to fourth-year students. M. W. F. 8:15 3 units, both semesters (Flügel, Briggs)

32. **Later History of English Literature.**—*a*. From 1660 to 1740, the age of Dryden and the age of Pope (first semester). *b*. From 1740 to 1798, the age of Johnson and the early Romantic Revival (second semester). Open to third-year students. M. W. F. 11:15
3 units, both semesters (Hall, Alden)

33. **Early Nineteenth Century Literature: 1798-1832.**—The age of Coleridge, Byron, Scott, and the Reviewers. Open to students of all departments in third and fourth years. T. 11:15
1 unit, both semesters (Seward)

37. **English Drama.**—English dramatic literature from its origin to the nineteenth century, omitting Shakspere. Open to students of all departments in third and fourth years. T. Th. 10:15
2 units, both semesters (Seward)

39. Prosody.—A study of the principles and history of English versification. Open to English students in the third and fourth years. T. Th. 8:15 2 units, 2d semester (ALDEN)

—. Chaucer.—[See English Philology, course 2.]

42. Milton: Paradise Lost.—Open to students of English in the third and fourth years; to students of other departments in the fourth year. M. W. F. 10:15 3 units, 1st semester (NEWCOMER)

45. European Literature in the Nineteenth Century.—A comparative study of the most notable poets, novelists, and dramatists since the French Revolution, with reference not only to literary values but also to social and political influences. Lectures. Open to seniors and graduate students of all departments, and to others by recommendation. M. W. F. 9:15 3 units, both semesters (ANDERSON)

50. Thesis.—In connection with the more advanced courses in literature, the student may, by special permission of the instructor, undertake a piece of research, the results of which shall be embodied in a thesis. 1 unit, either semester

GRADUATE COURSES

The preliminary requirements for entrance upon a course for an advanced degree in English are:

a. The course for the degree of A. B. in English or its equivalent.

b. An elementary knowledge of Anglo-Saxon.

c. A sound knowledge of two foreign languages (preferably one ancient and one modern language).

51. The Development of English Prose.—From the middle of the sixteenth century to the end of the eighteenth. [Not to be given in 1908-09.] 2 units, both semesters (NEWCOMER)

52. Theory of Poetry.—A study of the principal problems connected with the definition, classification, and criticism of poetry, and of the history of their critical treatment, with special reference to English literature. T. 2:30-4:30 2 units, both semesters (ALDEN)

53. English Lyric.—Studies in the lyric as a poetic form, and its development in England to the seventeenth century. [Not to be given in 1908-09.] (ALDEN)

[The work in courses 52 and 53 consists of lectures and seminary reports. These courses will ordinarily be given in alternate years.]

55. Shakspere.—A critical study of three or four of the plays upon the basis of Furness's Variorum and Liddell's Elizabethan Shakspere. Othello will be the first play read. M. 2:30-4:30 3 units, both semesters (ANDERSON)

ENGLISH PHILOLOGY

Ewald Flügel, Professor.

Raymond Macdonald Alden, William Dinsmore Briggs, Assistant Professors (Department of English Literature).

1. Anglo-Saxon.—Anglo-Saxon Grammar and translation of select passages in prose. M. W. F. 11:15
3 units, 1st semester (Briggs)

2. Chaucer.—This course is an elementary one, and includes an outline of Middle English Grammar for the beginner. T. Th. 8:15
2 units, 1st semester (Flügel)

3. History of Early English Literature (to 1557).—[See English Literature 31*a*.] M. W. F. 8:15
3 units, 1st semester (Flügel)

Advanced and Graduate Courses

For advanced work a reading knowledge of German, French (old and modern), and Latin is a prerequisite.

4. Middle English Exercises.—Hours and conditions to be arranged. (Flügel)

5. Beowulf.—Th. 1:30 2 units, 2d semester (Briggs)

6. English Paleography.—[Not to be given in 1908-09.]

7. Middle English Grammar.—[Not to be given in 1908-09.]
2 units, 1st semester (Flügel)

8. Chaucer (advanced course). Interpretation of the Prologue, and lectures on the history of Chaucer Criticism. Prerequisite: Course 2 or its equivalent. M. 2:30-4:30
2 units, 2d semester (Flügel)

9. Ballads and Lyrics of the 16th Century.—F. 2:30-4:30
2 units, 2d semester (Flügel)

10. History of English Philology. Lectures. [Not to be given in 1908-09.] 2 units, 2d semester (Flügel)

11. Research Work.—Papers and Lectures.
2 units, both semesters (Flügel)

SEMITIC LANGUAGES

HERSCH RAM (Department of Germanic Languages).

1. The Semitic Languages.—A general introduction and classification, with a survey of the development of the Semitic languages in connection with the history of the Semitic nations, and with regard to their bearings upon other fields of scientific research. M. 3.30
1 unit, both semesters (RAM)

2. Hebrew.—Elementary course. Davidson's Hebrew Grammar, with translations, followed by selected readings from the Old Testament. By arrangement 3 units, both semesters (RAM)

Advanced courses may be given in various Semitic disciplines for students prepared for such work.

BIBLICAL HISTORY AND LITERATURE

DAVID CHARLES GARDNER, Lecturer.

1. Life and Teaching of Christ.—The history of the life and times of Jesus, with a study of His words as recorded in the gospels and the application of His teaching to the life of to-day. Lectures, discussions, and papers. Th. 1:30 1 unit, both semesters (GARDNER)

PHILOSOPHY

HENRY WALDGRAVE STUART, Associate Professor.
GEORGE HOLLAND SABINE, Assistant Professor.

Courses in Philosophy are not open to first-year students.

1. Elementary Logic.—A general course in the principles of Deductive and Inductive Logic with special attention to the important types of fallacious reasoning. Text-book and exercises. M. W. F. 9:15
3 units, 1st semester (STUART, SABINE)

2. Elementary Ethics.—A study of the distinction of Good and Bad in human conduct—its meaning and its origins in history and in the life of the individual. Texts, lectures, and reports. M. W. F. 10:15
3 units, 1st semester (STUART)

3. History of Philosophy.—Lectures, prescribed reading, and occasional essays. This course is intended for the general student who wishes to know something of the history of philosophical ideas and systems, and their relations to the science, social and political condi-

tions, and general culture of the periods to which they belong. The course will cover the development from the early Greek period to the end of the eighteenth century in Germany, closing with a brief outline of the main philosophical problems of the nineteenth century. M. W. F. 10:15 3 units, both semesters (SABINE)

4. **Philosophy of the Nineteenth Century.**—A historical study of the development of philosophical problems and theories since Kant. Prerequisite: course 3. M. W. F. 11:15
3 units, 1st semester (SABINE)

5. **Philosophy in the Life of the Nineteenth Century.**—This course will deal with the influence of philosophical ideas upon different sides of the life of the nineteenth century. After a contrast, in outline, of the leading philosophical conceptions of the eighteenth and nineteenth centuries, special attention will be given to the expression of philosophical ideas in English Literature. No preliminary course is required. T. Th. 9:15 2 units, 2d semester (SABINE)

6. **Advanced Logic.**—A study of methods of investigation in use in the natural and social sciences, leading to a discussion of the logical value and philosophical significance of the cardinal assumptions and principles on which these methods are based. In the first part, selected classical investigations in different fields will be studied; in the second part, use will be made of Venn's Empirical Logic, Pearson's Grammar of Science, and other recent works on the logic of the sciences. Prerequisite: course 1 or an equivalent. M. W. F. 9:15
3 units, 2d semester (STUART)

7. **Historical and Practical Ethics.**—A study of the principal types of ethical theory in the light of their historical origins and with reference to their practical outcome in conduct, followed by a study of the ethical aspects of important problems in social and individual life. Lectures, assigned readings, and reports. A continuation of course 2, but open, after consultation, without this requirement. M. W. F. 10:15
3 units, 2d semester (STUART)

8. **History and Applications of the Theory of Evolution.** Lectures. This course will begin by tracing the history of the theory of evolution from its appearance among the Greeks to its formulation by Darwin. It will then deal with the philosophical applications of the evolutionary method and attempt to estimate the fundamental modifications which the evolutionary point of view has introduced into our general view of life and theory of the world. T. Th. 10:15
2 units, 2d semester (SABINE)

9. Greek Philosophy.—Lectures and discussions. This course will make a more detailed study of Greek thought than is possible in the general course on the History of Philosophy. After a brief survey of the Pre-socratic philosophy, the greater portion of the time will be spent in reading (in translation) selected Dialogues of Plato and portions of the works of Aristotle. [Not to be given in 1908-09.]
3 units, 2d semester (SABINE)

10. Problems of Modern Philosophy.—*a. Theory of Knowledge.* A study of the nature and functions of knowledge, commencing, by way of introduction to recent aspects of the problem, with a reading of selections from Descartes, Berkeley, and Hume. Discussions and reports. Three units of credit, two meetings per week. Prerequisite: courses 1 and 6, or course 3, or an equivalent. T. Th. 1:30, or as otherwise arranged. 3 units, 1st semester (STUART)

b. Metaphysics.—A survey and discussion of the principal problems arising in the attempt to take a comprehensive and unified view of life and the world. Three units of credit, two meetings per week Prerequisite: course 10*a* or an equivalent. T. Th. 1:30, or as otherwise arranged 3 units, 2d semester (STUART)

PSYCHOLOGY

FRANK ANGELL, Professor.
LILLIEN JANE MARTIN, Assistant Professor.

1. General Psychology.—Lectures and Exercises. Not open to first-year students. Students will use Wundt's Human and Animal Psychology as a book of reference. M. T. W. Th. 11:15
4 units, 1st semester (ANGELL)

2. Experimental Psychology.—Lectures, one hour; laboratory, two hours. Students are recommended to take this course in connection with courses 1 and 6. Lec. T. 1:30, Lab. T. Th. 1:30-4:30
2 units, both semesters (ANGELL, MARTIN)

3. Psychology of Evidence.—Open to those who have completed course 1, or its equivalent. T. Th. 11:15
2 units, 2d semester (ANGELL)

4. Advanced Laboratory Work in Psychology.—M. W. F. 1:30-4:30 3 units, both semesters (ANGELL, MARTIN)

5. Applied Psychology.—With special reference to the Fine Arts.—Open by permission to first-year students. M. W. F. 8:15
2 or 3 units, 2d semester (MARTIN)

6. Applied Psychology.—With special reference to the Social Relations.—Open by permission to first-year students. M. W. F. 8:15
3 units, 1st semester (MARTIN)

7. Current Psychological Literature. In this connection a subsection for the purpose of reading German Psychology will be formed, if so desired. By arrangement.
1 unit, both semesters (ANGELL)

8. Readings in French and German Psychology.
2 units, 1st semester (MARTIN)

9. Research Work.—By arrangement.
(ANGELL, MARTIN)

EDUCATION

ELLWOOD P. CUBBERLEY, Professor.
————, Associate Professor.
PERCY ERWIN DAVIDSON, Assistant Professor.
MORRIS ELMER DAILEY, Lecturer.
JESSE BRUNDAGE SEARS, Assistant.

The Department of Education offers three main lines of work:

1. Courses of a general nature on the history, function, and administration of public education, intended in part as information courses for the general university student and without reference to the work of teaching. To such students courses 1, 3, 5, and 10 are recommended.

2. Courses intended to assist other departments in preparing their students for work in secondary schools. All such students should confer with members of the Department of Education as to courses, but in general courses 1, 2, and 7 should be included if the candidate has not had experience in teaching.

3. Courses primarily for major students, or those making Education a minor, and intended to give special preparation to (*a*) those who desire to become teachers of Education in normal schools or colleges, (*b*) those who wish to prepare for supervisory or administrative positions in the public schools, and (*c*) those who wish to prepare for special work in the elementary field.

The courses in Education are open to all students as electives or as

minor subjects, but only those who desire to prepare for one of the lines of work mentioned above under (3), and whose preparation and experience are satisfactory to the Department, will be accepted as major students. In special cases those without teaching experience may be accepted as major students, but all such must be approved in practice teaching (course 21) before graduation.

Major students begin their work in Education with the sophomore year, taking courses 1, 2, and 3.

1. Public Education in America.—A study of the province and some of the more important problems of public education in the United States. An introductory course. Lectures, following a syllabus, with assigned readings. Open to second-year students. T. Th. 10:15
2 units, 1st semester (CUBBERLEY)

2. Educational Theory.—An introductory course dealing with topics fundamental to education, such as the nature of infancy, physical and social heredity, the relation of the organism to environment, of instinct to habit, etc. Open to first-year students. T. Th. 10:15
2 units, 2d semester (DAVIDSON)

3. History of Education in Europe.—Lectures, following a syllabus, with assigned readings. A study of the development of educational ideals and systems from the time of the Greeks and Hebrews to the present, with particular reference to the forces which have operated in the evolution of the various historic ideals and schools. The first semester covers the period up to the Reformation, and the second semester the period from the Reformation to the present. Either semester may be taken separately. Open to second-year students. M. W. F. 9:15 3 units, both semesters (CUBBERLEY)

4. Educational Psychology.—A study of the more important educational and psychological principles which underlie the work of teaching, with special reference to their application. A careful study will be made of some of the significant recent attempts to study problems in education from the psychological point of view. Open to juniors, seniors, and graduate students. M. W. F. 8:15
2 units, both semesters (————)

5. Sources for the History of Education.—A more extensive and intensive study of the sources for the History of Education in Europe than is undertaken in connection with course 3. This course may be taken in connection with course 3, or subsequently, but cannot precede it. [Course 4 will not be given in 1908-09.] 2 units, both semesters

6. History of Education in America.—Lectures, with assigned

readings and reports. A study of the development of educational ideals, systems, and methods from the earliest colonial period to the present, with particular reference to the growth and extension of public education in the United States. The first semester covers the colonial period, and the second semester the national period. Either semester may be taken separately. [Course 5 will not be given in 1908-09.]

7. Secondary Education.—Lectures, assigned readings, and reports. A study of the organization, scope, and method of public and private secondary schools in America, including a consideration of the preparatory, cultural, commercial, technical, and industrial aspects of secondary education. Intended primarily for and required of those preparing for the high school teacher's certificate. Open to seniors and graduates only. T. Th. 8:15 3 units, 2d semester (————)

8. City School Administration.—A study of some of the more important features and problems of city school administration, with a view to the establishment of principles. Open to advanced students, and intended primarily for those preparing for administrative work. T. Th. 10:15 2 units, 2d semester (CUBBERLEY)

9. School Hygiene.—School hygienic standards, and their application to school architecture, ventilation, heating, lighting, and sanitation. The hygiene of instruction, habits of study, and teaching. T. Th. 8:15 2 units, 1st semester (————)

10. State School Administration.—A study of the educational principles underlying the proper administration of school systems in states and counties, and involving a comparative study of the school laws and school systems of the various American states. The course includes a study of such topics as Federal and State policy, forms of control, revenue and its apportionment, the State and the teacher, the State and the child, private and sectarian education, and State oversight and control. Open to third-year students. M. W. F. 10:15
3 units, both semesters (CUBBERLEY)

11. Statistical Method.—The theory of statistical work and the application of statistical method to the study of typical problems in the different fields of education. [Course 11 will be given in 1909-10.]
2 units, 2d semester (CUBBERLEY)

12. Modern School Systems.—A comparative study of the more important foreign school systems, their policy of organization, ideals of work, methods of instruction, training of teachers, courses of study, statistics, and recent reforms. The school system of some one country will be studied each year. M. 3:30-5:30
2 units, each semester (————)

13. Logic of Education.—A study of the significance for education of the theory of knowledge and the psychology of thinking. Herbartian "General Method" will be reviewed. Open to students who have taken elementary work in psychology or logic. T. Th. 9:15
2 units, both semesters (DAVIDSON)

14. Social Phases of Education.—The course treats of the bearing on education of selected topics in social psychology, such as the individual and society, suggestion and choice, custom, tradition, imitation, and play. The course presupposes elementary work in psychology. [Not given in 1908-09.] 3 units, 1st semester (DAVIDSON)

15. Moral Education.—A study of the important ethical facts and principles underlying education. The course presupposes elementary work in psychology or ethics. T. Th. 11:15
2 units, 1st semester (DAVIDSON)

16. Educational Theory: Advanced Course.—The course deals with the phases of biology and psychology more directly concerned in education. Topic for 1907-08: The Relation of Nurture to Nature. The same topic will be continued through 1908-09. The course presupposes elementary work in Psychology, bionomics, and the nervous system. W. 3:30-5:30 2 units, both semesters (DAVIDSON)

17. The Curriculum.—A discussion of the relative importance of the historical, social, and psychological factors concerned in the formulation of the school and college curriculum. One division of the curriculum will be studied somewhat intensively during each semester. The topic for the first semester of 1908-09 will be, "Industrial and Vocational Education"; for the second semester, "The Course of Study in Literature." Open to supervisors, officers, teachers, and students on consultation with the instructor. Either semester may be taken separately. S. 9:30 2 units, both semesters (DAVIDSON)

18. The Training of Teachers.—This course deals with the organization of normal schools and the professional preparation of teachers, and is primarily intended for those entering on the work of training and supervising teachers. T. 3:30-5:30
2 units, second semester (DAILEY)

19. Thesis Work.—In certain courses, students may be given an additional hour of credit on presentation of a satisfactory thesis on an assigned topic embodying the results of independent work. The consent of the instructor is necessary before registering.
1 unit, both semesters

20. Special Courses.—Special work in independent research will be provided for students prepared to do advanced work, the nature of the investigation being determined by the student's preparation and needs. Such work will include studies in administration, educational history, and the curriculum. (CUBBERLEY, DAVIDSON)

21. Practice in Teaching.—Actual practice in the handling of classes and the giving of instruction, with accompanying conferences, is now required of all inexperienced candidates for the High School Teacher's Certificate. This work may be taken at the San Jose State Normal School, which makes special arrangements for the graduates of this University, or at any other California State Normal School. Hours for teaching and conferences must be arranged with the Normal School.

4 units, either semester (DAILEY)

22. Journal Club.—Regular meetings of instructors and advanced students for the discussion of new books and current literature. By arrangement.

1 unit, for the year (CUBBERLEY, DAVIDSON, ———)

COURSES IN OTHER DEPARTMENTS

The following special Teachers' Courses in other departments are recommended to students preparing to teach. Such courses are usually necessary for the departmental recommendation, but do not count again as a part of the required units in Education.

a. Teachers' Course in Greek.—[Course 17 in the Department of Greek.] 2 units, 2d semester (MURRAY)

b. Teachers' Course in Latin. [Course 17 in the Department of Latin.] 2 units, 2d semester (ELMORE)

c. Teachers' Course in German.—[Course 14 in the Department of Germanic Languages.] 2 units, 1st semester (COOPER)

d. Teachers' Course in French.—[Courses 24 and 25 in the Department of Romanic Languages.]

e. Teachers' Course in English.—[Course 28 in the Department of English.] 2 units, 1st semester (SEWARD)

f. Teachers' Course in History.—[Course 16 in the Department of History.] 2 units, 2d semester (SHOW)

g. Teachers' Course in Drawing.—[Course 10 in the Department of Drawing.] 2 units, 2d semester (CLARK)

h. Teachers' Course in Elementary Physics.—[Course 13 in the Department of Physics.] 1 unit, both semesters (SANFORD)

HISTORY

Ephraim Douglass Adams, Arley Barthlow Show, Professors.
Clyde Augustus Duniway, Associate Professor.
Henry Lewin Cannon, Assistant Professor.
Payson Jackson Treat, Percy Alvin Martin, Instructors.

The Teacher's Recommendation.—To obtain a Teacher's Recommendation in History the applicant must have completed, in a manner acceptable to the Department, three of the courses 3, 4 (or 11), 5, and 7, one advanced course (throughout one year), and the Teachers' Course in History.

With permission of their major departments, students may register for one unit less than the regular credit in courses 5 and 9, and be excused from supplementary reading.

1. Historical Training Course.—A practical course in the finding and handling of historical material. Required of first-year History majors. T. 8:15 1 unit, both semesters (Cannon, Martin)

2. Historical Training Course.—A continuation of course 1. Required of second-year History majors. [Not given in 1908-09.]
1 unit, both semesters

[History of Greece.—See Greek 10.]

[History of Rome.—See Latin 29.]

3a. The Early Middle Ages, 476-1095.—A general course, open to all students who have had one year in ancient history, or a satisfactory equivalent. M. W. F. 9:15 3 units, 1st semester (Show)

3b. The Later Middle Ages, 1095-1492.—A continuation of course *3a*. Open to all students who have had course *3a*, or a satisfactory equivalent. M. W. F. 9:15 3 units, 2d semester (Show)

4a. English History to 1485.—General outline course, not open to students presenting English history for entrance credit. T. Th. 10:15
2 units, 1st semester (Cannon)

4b. English History after 1485.—A continuation of course *4a*. T. Th. 10:15 2 units, 2d semester (Cannon)

5a. Modern European History, 1500-1715.—A general outline course, open to students who have had courses *3a* and *3b*, or a satisfactory equivalent. T. Th. 9:15 2 units, 1st semester (Adams)

5b. Modern European History, 1715-1900.—A continuation of course *5a*. T. Th. 9:15 2 units, 2d semester (Adams)

6. American Colonial and Revolutionary History to 1783.—Not open to first-year students. [Not given in 1908-09.]
2 units, both semesters (DUNIWAY)

7. Constitutional and Political History of the United States since 1783.—Open to students who have taken courses 4*a* and 4*b*, or a satisfactory equivalent. M. W. F. 10:15
3 units, both semesters (DUNIWAY)

8. The West in American History.—A study of the social and economic development of the United States, with special attention paid to the influence of the West. Open to History majors who have taken course 7; open to all but first-year students of other departments. [Not given in 1908-09.] 2 units, both semesters

9a. The Far East.—An account of the relations between Western nations and the peoples of Eastern Asia. The history of the Portuguese, Dutch, and British possessions in the Far East. Not open to first-year students. M. W. F. 10:15 3 units, 1st semester (TREAT)

9b. The Far East.—Australasia, China, Japan, the Philippines. A continuation of course 9*a*. M. W. F. 10:15
3 units, 2d semester (TREAT)

11. English Constitutional History.—Open to students who have taken courses 4*a* and 4*b*, or a satisfactory equivalent. T. Th. 11:15
2 units, both semesters (CANNON)

12. History of Germany.—General outline course, not open to first-year students. T. Th. 10:15
2 units, both semesters (MARTIN)

12a. History of France.—General outline course, not open to first-year students. T. Th. 8:15 2 units, both semesters (MARTIN)

13. Empire and Papacy in Middle Ages.—Open to third-year students who have taken courses 3*a* and 3*b*. Subject in 1908-09, "The Age of the Hohenstaufen." M. F. 10:15
2 units, 1st semester (SHOW)

14. Italian Renaissance.—Open to third-year students who have taken courses 3*a* and 3*b*. F. 10:15
1 unit, 2d semester (SHOW)

15. Europe since 1789.—A selected subject for some particular period is studied. Open to third-year students who have taken courses 5*a* and 5*b*. T. Th. 10:15 2 units, both semesters (ADAMS)

16. Teachers' Course.—Lectures, recitations, and practice covering

the topics in history customarily taught in preparatory schools. M. F. 2:30 2 units, 2d semester (Show)

18. **Diplomatic History of the United States.**—Primarily for third- and fourth-year students, who must have had at least two courses in modern history. M. W. 1:30
2 units, both semesters (Duniway)

19. **International Law.**—Primarily for third- and fourth-year students, who must give evidence of a fair knowledge of modern history. It is mainly a study of the leading cases, with class discussion to develop (1) a statement of the general principles of international law, and (2) an outline of the history of the subject. [Not given in 1908-09.] 3 units, both semesters (Duniway)

20. **Oral Debate.**—Open to a limited number of advanced students, and should be preceded by English 15. The course is intended to give training in the preparation of oral arguments on public questions in the fields of history, politics, economics, and sociology, and to afford experience in public speaking, with the benefit of criticism by the instructors. W. 2:30-4:30
2 units, both semesters (Duniway, Alden, Bassett)

21. **Tropical Colonization in the Far East.**—A study of the present methods of the English, Dutch, French, German, and American peoples in managing tropical dependencies in the Far East. Open to students who have taken courses *9a* and *9b*. T. Th. 9:15
2 units, 1st semester (Treat)

22. **History of Australasia.**—An account of British colonization in Australia and New Zealand to the present time. Open to students who have taken courses *9a* and *9b*. T. Th. 9:15
2 units, 2d semester (Treat)

Advanced Courses

Intended primarily for graduate students, but open to advanced undergraduates, with permission of the instructors.

27. **Painting of the Italian Renaissance.**—A practical study of one or more great Renaissance artists. Subject for 1908-09, "Botticelli." Ability to read German and French is desirable. F. 3:30
1 unit, each semester (Show)

28. **Mediæval Institutions.**—A practical study of select feudal documents. Ability to read Latin, German, and French is required. F. 3:30 1 unit, 2d semester (Show)

29. English Constitutional History.—Subject in 1908-09, "Magna Charta." Th. 2:30-4:30 2 units, both semesters (CANNON)

31. English and American Relations since 1815.—Open to students who have had course 15, and to others by special permission. W. F. 1:30 2 units, both semesters (ADAMS)

32. The Reformation.—M. 2:30-4:30 2 units, both semesters (MARTIN)

35. English Diplomatic Action During the French Revolution.—Reading ability in French required. By appointment 2 units, each semester (ADAMS)

36. The Philippines under Spain.—W. 2:30-4:30 2 units, both semesters (TREAT)

37. Seminary in Later United States History.—Subject for 1908-09, "The Declaration of Independence." T. 2:30-4:30 2 units, both semesters (DUNIWAY)

ECONOMICS AND SOCIAL SCIENCE

ALLYN ABBOTT YOUNG, THORSTEIN VEBLEN, ALBERT CONSER WHITAKER, Associate Professors.
HARRY ALVIN MILLIS, JAMES MARVIN MOTLEY, Assistant Professors.
IRA BROWN CROSS, Assistant.

The courses offered by the Department of Economics and Social Science fall into two general groups. The elementary courses (1-13) are designed for the general student as well as for those specializing in the department, and include discussions of the more important contemporary economic and social problems—the understanding of which is believed to be a condition of good citizenship. The advanced and graduate courses offer to properly prepared students opportunities for the intensive study of special problems and for training in the methods of investigation used by economic science.

While no attempt is made to offer technical training in business methods, students looking forward to a business career will find courses 1, 4, 5*a*, 6, 8, and 11 valuable as affording a survey of important business institutions and relations. An endeavor is made, however, to render some of the courses offered by the department of direct technical value to students planning to enter the government service, or to engage in the work of public or private institutions for social betterment.

1. Elements of Economics.—A descriptive course, constituting an

introduction to the subject. Must precede all other courses in the department. Two lecture hours and one quiz hour each week. M. W. F. 9:15 3 units, both semesters (YOUNG)

2. Principles of Economics.—An intensive study of the principles of economics as developed in course 1. Required of Economics majors. T. Th. 8:15 2 units, both semesters (MILLIS)

4. Money and Banking.—Forms and laws of money; the money question. Credit and banking; the money market and foreign exchanges. M. W. F. 9:15 3 units, both semesters (WHITAKER)

5. Economic History of the United States.—A discussion of the more important economic factors in the development of the United States. Special emphasis is placed upon the growth of the population and upon the economic and social results of the extension of transportation facilities. M. W. F. 11:15

3 units, 1st semester (YOUNG)

5a. Railway Transportation.—The present American railway system, railway finance, railway statistics, theory of rates, methods of public control in Europe, Australasia, and America. It is desirable that this course be preceded by course 5. M. W. F. 11:15

3 units, 2d semester (YOUNG)

6. The Corporation and Trust Problem.—Elementary survey of corporation law; history of corporations and corporate combinations, pools and trusts, in relation to public policy; present tendencies in legislative control. T. Th. 9:15

2 units, both semesters (WHITAKER)

8. Public Finance.—A general course dealing chiefly with the principles underlying public expenditures, revenues, debts, and financial administration. M. W. F. 8:15 3 units, 1st semester (MILLIS)

11. The Labor Problem.—The modern industrial system, wage system, collective bargaining, and other features of trade unionism, strikes, boycotts and lock-outs, arbitration and conciliation. M. W. F. 10:15 3 units, 1st semester (MILLIS)

11a. Methods of Economic Reform.—A continuation of course 11, which the student must have completed. The treatment of the unemployed, workingmen's insurance, profit-sharing, co-operation, and socialism, will be studied. M. W. F. 10:15

3 units, 2d semester (MILLIS)

12. Social Economics.—A general survey of the leading economic, social, and individual causes of social disorder and poverty;

methods and principles of modern relief policies; specific social problems; social legislation and other current movements for social betterment. M. W. F. 9:15 3 units, both semesters (Motley)

13. Socialism.—The history of socialism and allied social movements, together with an analysis of socialistic doctrines. M. W. F. 8:15 3 units, 1st semester (Veblen, Cross)

Advanced and Graduate Courses

14. Value and Income.—A study of the factors governing interest, rents, wages, and profit, preceded by a review of the theory of value. T. Th. 11:15 2 units, both semesters (Whitaker)

15. American Methods of Taxation.—An intensive study of the federal and state taxes, including the customs and internal revenue duties, "direct" income, business and inheritance taxes, the general property and corporation taxes. Should be preceded by Economics 8. M. W. F. 8:15 3 units, 2d semester (Millis)

16. History of Political Economy.—A survey of the growth of economic theories and opinions in modern times, together with an inquiry into the character and methods of current economic science. Prerequisites: courses 1 and 2. M. W. F. 11:15
3 units, both semesters (Veblen)

18. Seminary in Social Economics.—Certain social institutions and relief measures will be studied critically, the object being to familiarize the student with available materials and to acquaint him with methods of social research. Lectures. Courses 1 and 12 are prerequisites. M. W. F. 10:15 (or other hour by arrangement)
3 units, both semesters (Motley)

19. Economic Factors in Civilization.—The bearing of economic motives and conditions upon the development of culture, art, religion, science, and the institutions of domestic and civic life. Students admitted only after consultation with instructor. T. Th. 2:30
3 units, both semesters (Veblen)

20. Seminary in Statistics.—Investigation of selected social and economic problems with special reference to the use of the statistical method. [Given in 1908-09 and alternate years.] M. 2:30
2 units, both semesters (Young)

21. Seminary in Railway and Corporation Finance.—Study of the financial policies of selected corporations, with special reference to the

relation of such policies to the public interest. Prerequisites: courses 5*a* and 6. [Given in 1907-08 and alternate years.]

2 units, both semesters (YOUNG)

22. Economic Conference.—Bi-weekly meetings of instructors and graduate students for discussion of current economic literature and the presentation of the results of original research. W. 2:30

LAW

CHARLES HENRY HUBERICH, FREDERIC CAMPBELL WOODWARD, Professors
ARTHUR MARTIN CATHCART, WESLEY NEWCOMB HOHFELD, Associate Professors.
CHARLES ANDREWS HUSTON, JOSEPH WALTER BINGHAM, Assistant Professors.
JOHN SLATER PARTRIDGE, Lecturer.

The course of instruction in the Department of Law extends through three full academic years. It is designed to afford such a training in the fundamental principles of the English and American law as will constitute a thorough preparation for the practice of law in the jurisdictions where the common law prevails.

Every candidate for a degree in Law will be required to take all of the first-year courses. The work of the second and third year of professional study is elective. The amount of class-room work during the first year averages fifteen hours per week. During the second and third years the class-room work averages thirteen hours per week. No student may register for more than fifteen hours of law per week, nor will a student be permitted to attend a course for which he is not registered.

PRELIMINARY COURSE

1. Introduction to the Study of Law.—*Part I.* Nature, origin, and evolution of law; sources of law; sanctions of law; legal rights and duties; classification of law; historical sketch of English and American law. *Part II.* The methods of legal study; the use of reports, digests, encyclopedias, and treatises; practice in the analysis of cases and in the preparation of abstracts and briefs. Text-books to be announced. T. Th. 11:15

2 units, 2d semester (HUBERICH, CATHCART)

FIRST-YEAR COURSES

2. Contracts.—Offer and acceptance; consideration; contracts under seal; contracts for the benefit of third persons; assignments;

joint and several contracts; the Statute of Frauds; conditions; impossibility; illegality; discharge of contracts. Open to law students having 50 units' credit, and to special or graduate students. Text-book: Williston's Cases on Contracts. First semester, M. W. F. 8:15; second semester, T. W. Th. F. 8:15

3 units, 1st semester; 4 units, 2d semester (WOODWARD)

3. Criminal Law and Procedure.—Nature and sources of criminal law; crime as an act; attempts; criminal intent; circumstances affecting illegality of act; specific offenses: crimes against the person, larceny and allied offenses, crimes against the dwelling-house, conspiracy; criminal procedure. Open to law students having 80 units' credit, and to special or graduate students. Text-book: Beale's Cases on Criminal Law (2d ed.). M. T. W. Th. 11:15

4 units, 1st semester (HUBERICH)

4. Torts.—Trespass to person, to real property, and to personal property; excuses for trespass; conversion; legal cause; negligence; contributory and imputed negligence; plaintiff's illegal conduct as a defense; duties of land-owners; hazardous occupations; liability for animals; deceit; defamation, slander, libel, privilege, malice; malicious prosecution, criminal and civil; interference with social and business relations, inducing breaches of duty, fair and unfair competition, strikes, boycotts, business combinations. Open to law students having 80 units' credit, and to special or graduate students. Text-book: Ames and Smith's Cases on Torts, Vols. I and II and Supplement. Daily 9:15 5 units, 1st semester (CATHCART)

5. Property I.—Distinction between real and personal property; acquisition of rights in personal property; gifts; bailment; lien; pledge. Real property: tenures; estates; seisin and conveyance; Statute of Uses; incidents of ownership in real property; fixtures; easements; covenants as to use; public rights; franchises; rents. Open to law students having 80 units' credit, and to special or graduate students. Text-book: Gray's Cases on Property, Vols. I and II (2d ed.). M. W. F. 10:15 3 units, both semesters (BINGHAM)

6. Equity I.—Historical development of equity; general principles relating to jurisdiction, procedure and remedies; specific performance of contracts with special emphasis on the relations between vendors and purchasers of realty; certain essentials of the law of mortgages; bills for accounting; specific reparation and prevention of torts, including waste, trespass, nuisance, disturbance of easements, infringement of patents and copyrights, interference with business relations. Open to

law students having 80 units' credit, and to special or graduate students. Text-book: Ames's Cases in Equity Jurisdiction, Vol. I. M. T. W. Th. 8:15 4 units, 2d semester (HOHFELD)

7. Agency.—Nature of relation; appointment; liabilities of principal; torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal; obligations between principal and agent; delegation of agency; termination; ratification. Open to law students having 80 units' credit, and to special or graduate students. Text-book: Wambaugh's Cases on Agency. M. T. W. Th. 9:15
4 units, 2d semester (HUSTON)

SECOND-YEAR COURSES

8. Bills and Notes.—This course considers all types of negotiable paper, and discusses in detail the law of bills of exchange, notes, and checks, including: formal requisites; acceptance; indorsement; transfer; extinguishment; obligation of parties; diligence; specialty character; the effect of the Negotiable Instruments Law. Open to second- and third-year law students. Text-book: to be announced. M. T. W. Th. 9:15 4 units, 2d semester (HUBERICH)

9. Damages.—This course deals with the functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Open to second- and third-year law students. Text-book: Beale's Cases on Damages. T. Th. 10:15 2 units, 2d semester (CATHCART)

10. Equity II: Trusts.—Nature and requisites of trusts with respect to consideration, subject-matter, the trustee, the cestui que trust; language necessary for the creation of trusts; kinds of trusts: express, constructive, and resulting trusts, private and charitable trusts; transfer of the respective interests of the trustee and the cestui que trust by act of party and by death, marriage, etc.; priorities; extinguishment of trusts; resignation or removal of trustee; duties of trustee as to the general execution of the trust and as to the investment of the trust funds. Open to second- and third-year law students. Text-book: Ames's Cases on Trusts (2d ed.). M. T. W. Th. 8:15
4 units, 1st semester (HOHFELD)

11. Equity III.—Interpleader; bills of peace and quia timet; cancellation of contract; clouds on title; perpetuation of testimony; rights of future enjoyment; reformation and rescission of contract; mistake, fraud, misrepresentation; duress and undue influence. Open to second-

and third-year law students. Text-book: Ames's Cases in Equity Jurisdiction, Vol. II. T. Th. 11:15

2 units, 2d semester (HUSTON)

12. Insurance.—Marine, fire, and life insurance. Insurable interest in various kinds of policies; concealments; misrepresentations; warranties and other matters affecting the validity of the contract; amount of recovery; subrogation, waiver, estoppel, election, powers of agents; assignees and beneficiaries. Open to second- and third-year law students and to others by special permission. [Not to be given in 1908-09; to be given in 1909-10.] Text-book: Wambaugh's Cases on Insurance. 3 units, 1st semester (HUSTON)

13. Partnership.—Nature of a partnership, its purposes, and members; creation of partnerships; nature of partner's interest; firm name and good will; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Open to second- and third-year students. Text-book: Burdick's Cases on Partnership. M. W. F. 10:15

3 units, 2d semester (WOODWARD)

14. Persons.—Marriage: promise to marry; marriage contract at common law and under statutes; rights of husband and wife in each other's property; status of married women; transactions between husband and wife; torts affecting marital relations; separation; divorce. Parent and child: custody; services and earnings; torts to children; torts by children; adoption; illegitimacy. Infancy: period of infancy; voidable acts; disaffirmance, ratification; contracts for necessaries; obligations created or authorized by law; liability for tort; guardian and ward. Insanity; drunkenness; alienage. Open to second- and third-year law students. [Not to be given in 1908-09; to be given in 1909-10.] Text-book: Woodruff's Cases on Domestic Relations (2d ed.).

2 units, 2d semester (WOODWARD)

15. Pleading and Practice I.—(*a*) Procedure at common law: original writs and process; modes of trial; the common law actions; declarations; demurrers; dilatory pleas; pleas in bar; rules of pleading; motions based upon the pleadings. Text-book: Keen's Cases on Pleading. (*b*) Procedure in equity: persons capable of suing and being sued in equity; parties to a suit in equity; form and requisites of a bill in equity; proceedings on behalf of plaintiff; proceedings on behalf of

defendant; decrees, etc. Text-book: Thompson's Cases on Equity Pleading and Practice. This course is a prerequisite to course 27 and is open to second- and third-year law students. M. W. F. 11:15

3 units, 2d semester (CATHCART)

16. Property II.—Acquisition of property on the death of former owner, escheat, descent, occupancy, gifts mortis causa; the making revocation and republication of wills, probate and administration, payment of legacies and distribution, ademption and lapse of legacies. Open to second- and third-year law students. Prerequisite: course 5. Text-book: Gray's Cases on Property, Vol. IV (2d ed.). M. W. F. 9:15

3 units, 1st semester (BINGHAM)

17. Public Service Companies.—The nature, rights, and obligations of public calling as exemplified by railway, telegraph, telephone, gas, water, irrigation, and other public service companies. Open to second- and third-year law students. [Not to be given in 1908-09.] Text-book: Beale and Wyman's Cases on Public Service Companies.

2 units, 2d semester (CATHCART)

18. Quasi-Contracts.—Sources, extent, and nature of the obligation; distinctions between quasi-contract and pure contract and between quasi-contract and tort; obligation arising from benefits conferred in the absence of contract; obligation arising from benefits conferred under a contract but without the receipt of an equivalent. Open to second- and third-year students. [Not to be given in 1909-10.] Text-book: Scott's Cases on Quasi-Contracts. M. W. F. 11:15

3 units, 1st semester (CATHCART)

19. Sales.—Subject matter of sale; executory and executed sales; bills of lading and jus disponendi; stoppage in transitu; fraud; factor's acts; warranty and remedies for breach of warranty; Statute of Frauds. Open to second- and third-year law students. Text-book: Williston's Cases on Sales (2d ed.). M. W. F. 10:15

3 units, 1st semester (WOODWARD)

THIRD-YEAR COURSES

20. Administrative Law and Public Officers. — Administrative regulations; jurisdiction, discretion, adjudication; enforcement of orders; habeas corpus; mandamus; certiorari; equitable jurisdiction in public law. Open to third-year law students. [Not to be given in 1908-09.] Text-books: Goodnow's Cases on the Law of Officers, and Goodnow's Cases on Government.

3 units, 1st semester (HUSTON)

21. Admiralty.—Admiralty jurisdiction, basis; maritime contracts, torts, and crimes; maritime liens, ex contractu, ex delicto, priorities, discharge; bottomry and respondentia obligations; salvage; general average. Open to second- and third-year law students. Text-book: Ames's Cases on Admiralty. T. Th. 10:15

2 units, 1st semester (HUSTON)

22. Conflict of Laws.—Nature and force of foreign law; comity; jurisdiction over persons and things; jurisdiction of courts; creation of personal rights and of rights of property; torts and contracts; enforcement of rights. Open only to third-year law students. Text-book: Beale's Cases on Conflict of Laws. M. T. W. Th. 9:15

4 units, 1st semester (HUBERICH)

23. Constitutional Law.—Nature and sources of American constitutional law; adoption and amendment of constitutions; separation of powers; power of judiciary to declare acts of the legislative and executive branches of government unconstitutional; citizenship; privileges and immunities of citizenship; due process of law; police power; eminent domain; taxation; ex post facto and retroactive laws; laws impairing the obligation of contracts; regulation of commerce; money; war; government of territories. Open to second- and third-year law students and to well-prepared fourth-year students in History, Economics and Political Science. [Not to be given in 1908-09; to be given in 1909-10.] Text book: Thayer's Cases on Constitutional Law

3 units, both semesters (HUBERICH)

24. Evidence.—Respective functions of judge and jury; "law and fact"; presumptions; burden of proof; judicial notice; kinds of evidence; relevancy as primary test of admissibility; principles and rules of admissibility relating to the following: evidence consisting of misleading or unimportant matters, evidence of character, admissions, confessions, hearsay, opinion evidence including expert testimony, real evidence, evidence relating to execution, contents, and interpretation of writings; various rules of substantive law stated in terms of "parol evidence rule"; competency of witnesses; privilege of witnesses; examination of witnesses; impeachment of witnesses. Open only to third-year law students. Text book: Thayer's Cases on Evidence (2d ed.). M. W. F. 10:15 3 units, both semesters (HOHFELD)

25. Mortgages.—Essential elements of legal and equitable mortgages, rights of mortgagor and mortgagee at law and in equity; title, possession, dower, curtesy, waste, priorities, collateral agreements, foreclosure, redemption; extension, assignment, and discharge of mortgages.

Open to second- and third-year law students. [Not to be given in 1908-09.] 2 units, 2d semester (BINGHAM)

26. Municipal Corporations.—General nature; corporate capacity; self government; creation, annexation, division, dissolution, succession; modes of action, ratification and curative acts; estoppel by recitals; municipal police power; local improvements and services, including special assessments; municipal property, especially public streets; municipal contracts; expenditure and donations; indebtedness and its constitutional limit; liability. Open to second- and third-year law students. Text-book: to be announced. T. 8:15, F. 9:15
2 units, 2d semester (HUSTON)

27. Pleading and Practice II: Code Pleading.—Historical development of the reformed procedure; the single civil action; parties to actions; the complaint; the answer; the reply; motions and demurrers. Prerequisite: course 15. Open only to third-year law students. Text-book: Hinton's Cases on Code Pleading. [Not to be given in 1908-09; to be given in 1909-10.] 3 units, 1st semester (CATHCART)

28. Pleading and Practice III.—Organization and jurisdiction of courts; court records and files; proceedings prior to judgment, including: service and return of summons and motions relating thereto, appearances, provisional remedies, such as attachment, arrest, etc., lis pendens, the trial, exceptions and findings, verdict; the judgment, its entry and satisfaction; proceedings subsequent to judgment, including: stay of execution, costs, execution, motion for new trial, appellate proceedings; special proceedings, including writs of certiorari, mandamus, and prohibition. Prerequisite: courses 15 and 27. Open only to third-year law students. Text-book: California Code of Civil Procedure; also selected cases. S. 10-12. 2 units, 2d semester (PARTRIDGE)

29. Private Corporations.—Nature of a corporation and its relation to its stockholders; creation of a corporation; de facto corporations; stock subscriptions; promoters; interpretation of charters; implied powers; formalities of corporate contracts; dividends; transfer of stock; forfeiture of charters; contracts; powers and duties of directors; rights of stockholders; dividends; transfer of stock; forfeiture of charters; corporate liability for torts, crimes, and contempts; ultra vires transactions; rights and remedies of corporate creditors; preferences by corporations; stockholders' liability; intercorporate relations; purchase by a corporation of its own stock; dissolution of corporations; corporate receiverships; foreign corporations; limits of legislative con-

trol. Open only to third-year law students. Text-book: Smith's Cases on Private Corporations. T. W. Th. F. 8:15
4 units, 1st semester (HUSTON)

30. Property III.—Conditional estates; reversions and remainders; vesting of estates; future interests in property other than at common law; powers; the rule against perpetuities. Prerequisite: course 5. Open to second- and third-year law students. Text-book: Gray's Cases on Property, Vols. V and VI. M. W. Th. F. 8:15
4 units, 1st semester (BINGHAM)

31. Roman Law.—A study of the Institutes of Gaius and Justinian and of selected titles from the Digest, Code, and Novels. A reading knowledge of Latin and of either German or French will be required. Open to second- and third-year law students. [Not to be given in 1908-09.] 2 units, both semesters (HUBERICH)

32. Suretyship.—Kinds of suretyship; Statute of Frauds; surety's defenses due to original defects in his obligation or its subsequent discharge; surety's right to subrogation, indemnity, contribution, or exoneration; creditor's right to surety's securities. Open to second- and third-year students. [Not to be given in 1908-09.] Text-book: Ames's Cases on Suretyship. 2 units, 1st semester (BINGHAM)

SPECIAL COURSES

33. Bankruptcy.—Jurisdiction of the United States and the States; who may be a bankrupt; who may be petitioning creditors; acts of bankruptcy; what property passes to the trustee; provable claims; protection, exemptions, and discharge. Open to second- and third-year law students. Lectures and assigned reading.
10 lectures, 2d semester. No credit (WOODWARD)

34. Elements of Business Law.—Contracts; sale of goods; bailments; insurance; suretyship and guaranty; bills of exchange, promissory notes, and checks; agency, master and servant; partnerships, corporations; property rights; wills and deeds, liens, pledges, and mortgages; landlord and tenant; sale and purchase of realty; the relations between trustee and cestui. Not open to law majors. Open to all other students having 30 units credit. Text-book: Huffcut's Elements of Business Law. Lectures, recitations and assigned reading. T. Th. 8:15 2 units, both semesters
(HUBERICH, WOODWARD, HOHFELD, HUSTON, BINGHAM)

35. International Law.—[See course 19 in History] Text-book: Scott's Cases on International Law. [Not to be given in 1908-09.]
3 units, both semesters (DUNIWAY)

DRAWING

Arthur Bridgman Clark, Associate Professor.
Robert Bartholow Harshe, Assistant Professor.
Chloe Lesley Starks, Instructor.

The Department aims to meet the needs of three classes of students: students who wish training in artistic perception and graphic expression for its general culture value; students who wish to begin professional art study while receiving other university training; and technical students to whom knowledge of representative drawing is essential.

Course 1 or its equivalent must precede all other courses excepting courses 6, 8, and 9. Courses 3, 4, 5, 11, and 12 may receive credit a second time when continued with sufficient skill.

For students making Drawing their major study the following is an average programme: Elementary still life (3 to 5 units); Cast drawing (3 units); Landscape (3 units); Perspective (2 units). Total, 13 units the first year.

Design (4 units); Color (4 units); Head drawing or Landscape (5 units); Lectures (2 units). Total, 15 units the second year.

Journal Club, Teachers' course, and a continuation of Design, Handicraft, or Landscape, or Head and Illustration, or Color (the particular combination which is best fitted to the purposes of the particular student). Total, 20 units during the third and fourth years.

The Teacher's Recommendation.—The minimum requirement for the High School recommendation in Drawing is course 1, 2, 3 or 4, and 5 (3 units each) also 6, 10, and 11: total, 18 units.

1. Elementary Drawing.—Introductory course; still life in pencil, charcoal, and wash. Open to all students. T. W. Th. F. 1:30-4:30
2 to 5 units, either semester (Starks)

2. Drawing of the Head.—From the cast. Daily 1:30-4:30
3 to 5 units, either semester (Harshe)

3. Drawing of the Head.—A continuation of course 2 from life. Open to second-year students. Daily 1:30-4:30
3 to 5 units, either semester (Harshe)

4. Color.—Still-life painting in oils or water-colors. Open to students with six units of drawing. Daily 1:30-4:30
2 to 5 units, either semester (Harshe)

5. Landscape.—Chiefly outdoor work; but supplemented during the colder weather of each semester by study from photographs and

from plant forms with special attention to decorative composition and interpretation. The pen, pencil, charcoal or brush are used in accordance with the capacity and needs of each student. T. W. Th. 1:30-4:30
3 units, either semester (CLARK)

6. **Lectures.**—Ideals and processes in pictorial and applied art. Open to all students of the University. T. Th. 11:15
2 units, 1st semester (CLARK)

7. **Journal Club.**—Required of third- and fourth-year students of the Department. Th. 4:30 1 unit, 2d semester (CLARK)

8. **Scientific Perspective.**—A series of problems involving the mathematical principles of perspective, and the application of these principles to actual buildings and objects. [Course 8 is given in alternate years; will be offered in 1908-09.] T. Th. 8:15
2 units, 2d semester (CLARK)

9. **Science Drawing.**—A course designed to assist students in scientific illustration. It includes the drawing of simple scientific subjects in pen outline, line and stipple shading, wash, and line and wash. Especial attention will be paid to the needs of individual students. Open to science students on advice. T. W. Th. F. 1:30-4:30
2 units, either semester (STARKS)

10. **Teachers' Course.**—For intending teachers of drawing. Open to advanced students only. *Given in alternate years.
2 units, 2d semester (CLARK)

11. **Design.**—Exercises in the principles of abstract design, decorative design, and structural design. Application of the principles to interior household fittings, and the handicratts generally. T. Th. 10:15 2 to 3 units, both semesters (CLARK)

12. **Illustrating.** Practice in design and appreciation of the book arts, including title pages, book plates, borders, announcements, head and tail pieces, and illustrations. Must be preceded by course 3. Daily 1:30-4:30 2 to 3 units, both semesters (HARSHE)

13. **Handicraft.**—Exercises in stencilling and block printing, wood carving, decorative metal work, etc. To follow course 11. Th. F. 1:30-4:30 2 units, either semester (HARSHE)

MATHEMATICS

Robert Edgar Allardice, Rufus Lot Green, Professors.
Hans Frederik Blichfeldt, Associate Professor.

The courses in this department have been arranged to meet the wants of two classes of students—students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some Mathematics in their course. Students in Engineering are provided for in the Department of Applied Mathematics.

For students whose major subject is Mathematics the following programme of work is recommended: In the first year, courses 2, 3, and 4; in the second year, courses 9 and 10 or 21; in the third year, courses 11, 12, and 13; while the work during the fourth year and for graduate students may be selected from the remaining courses, and from the Department of Applied Mathematics. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students whose major subject is Mathematics are recommended to begin the study of either French or of German in their freshman year.

Students who desire to take one or more years of Mathematics as a part of a liberal training are recommended to begin their work in this Department with one or more of the courses 1, 2, 3, or 7.

The Teacher's Recommendation.—For the High School recommendation in Mathematics the following courses are required: 1, 2, 3, 4, and 9.

1. Trigonometry.—Elementary course, with applications involving logarithmic calculation. T. Th. 9:15
2 units, 1st semester (Blichfeldt)

2. Solid Geometry.—Elementary course. T. Th. 9:15
2 units, 2d semester (Blichfeldt)

3. Algebra.—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorems, factors, complex numbers, introduction to theory of equations, progressions, permutations and combinations. Presupposes entrance credit in Elementary Algebra. Daily 10:15
5 units, 1st semester (Green)

4. Co-ordinate Geometry.—An elementary course in the analytic geometry of the conic sections, including the discussion of the general equation of the second degree. Presupposes course 3. Daily 10:15
5 units, 2d semester (Green)

[Students making Mathematics their major subject should take

courses 3 and 4 as the first year's work, and those who have not had Trigonometry should also take course 1.]

7. General Course.—An elementary course, including toipcs in algebra, trigonometry, co-ordinate geometry, and calculus. M. W. F. 9:15 3 units, both semesters (BLICHFELDT)

9. Differential and Integral Calculus.—Lectures on the Differential and Integral Calculus, with applications to the theory of plane curves, on the lines of Williamson's treatises. M. W. F. 9:15
3 units, both semesters (ALLARDICE)

10. Advanced Co-ordinate Geometry.—A continuation of course 4, and will include the elements of the Theory of Determinants. T. Th. 9:15 2 units, both semesters (GREEN)

11. Advanced Calculus.—A continuation of course 9. M. W. F. 11:15 2 units, 1st semester (ALLARDICE)

12. Theory of Functions.—Elementary course. M. W. F. 11:15.
2 units, 2d semester (ALLARDICE)

13. Non-Euclidean Geometry.—Presupposes a course in Calculus. T. Th. 11:15 2 units, 2d semester (BLICHFELDT)

15. Differential Equations.—M. W. F. 10:15
3 units, both semesters (BLICHFELDT)

16. Theory of Functions.—Advanced course. M. W. F. 2:30
3 units, both semesters (ALLARDICE)

17. Theory of Curves.— 2 units, 1st semester (ALLARDICE)

18. Insurance.—An introduction to the simpler parts of the Theory of Probabilities; the principles and problems of insurance; the mathematical principles involved in actuarial science, with practice in the computation and use of tables. M. W. F. 9:15
3 units, both semesters (GREEN)

19. Reading Course.- In this course the students will read French and German text-books under the direction of the instructors. T. Th. 2:30 2 units, both semesters (ALLARDICE, BLICHFELDT)

20. Vector Analysis.—M. W. F. 2:30
3 units, both semesters (MANNING)

21. Projective Geometry—T. Th. 11:15
2 units, both semesters (ALLARDICE)

22. Theory of Potential.—[Not given in 1908-09.]
4 units, 1st semester (BLICHFELDT)

23. Differential Geometry.—[Not given in 1908-09.]
2 units, 2d semester (ALLARDICE)

APPLIED MATHEMATICS

Leander Miller Hoskins, Professor.
Halcott Cadwalader Moreno, Sidney Dean Townley, William Albert Manning, Assistant Professors.
Jesse Dwight Suter, Edward Jordan, Instructors.

Under Applied Mathematics are included the courses in mathematics which are required of students in Engineering. The aim is to make these courses practical in the sense of furnishing thorough drill on fundamental principles and much practice in their application. Emphasis is laid upon accuracy and system in the solution of numerical problems. Students whose training in arithmetical work has been deficient, or who are otherwise inadequately prepared, or who lack aptitude for mathematical study, cannot pursue these courses successfully.

Courses A and B are the equivalents of the corresponding entrance subjects (5 and 6), and are prerequisites to the regular first-year work, so that students entering the University without entrance credit in these subjects will not be able to complete the requirements for graduation in four years.* Course 1 embraces the regular first-year work, and courses 2 and 3 the regular second-year work.

A. Solid Geometry.—This presupposes Plane Geometry, and is not required of those having entrance credit in Solid Geometry (subject 5). T. Th. 9:15 2 units, 1st semester (Suter)

B. Trigonometry.—This is equivalent to entrance subject 6, and is not open to students having entrance credit in this subject. Plane Geometry is a prerequisite. (I, II) M. W. F. 10:15
3 units, 1st semester (Moreno, Manning)

1. First-year Mathematics.—This course embraces (*a*) Algebra, (*b*) Trigonometry, (*c*) Co-ordinate Geometry, approximately equal periods being given to the three subjects. The work begins with a rapid review of Elementary Algebra, intended to test the student's familiarity with fundamental principles and operations, those showing deficient preparation not being permitted to continue. This review is followed by more advanced work in Algebra, but emphasis is laid on the thorough mastery of the ordinary rules rather than on covering a large amount of ground. In the second part of the course much attention is paid to reviewing and enforcing the fundamental principles of Plane Trigonometry, and especially to the numerical solution of triangles using both natural and logarithmic functions; this is followed

* It is not intended to offer these courses permanently, but a year's notice will be given of their withdrawal.

by the elements of Spherical Trigonometry. In Co-ordinate Geometry it is aimed to familiarize the student with the method of co-ordinates, so that he can apply it independently to simple problems, rather than to devote much attention to a detailed study of the properties of the conic sections or other curves. The course is open to students having entrance credit in Elementary Algebra, Plane and Solid Geometry, and Plane Trigonometry. (I, II, III) Daily, 8:15; (IV) Daily, 11:15

5 units, both semesters (MANNING, SUTER, JORDAN)

2. Calculus.—An elementary course on Differential and Integral Calculus, in which emphasis is laid on fundamental principles and simple applications. (Formerly numbered 5). (I, II, III) M. W. F. 9:15

3 units, both semesters (MANNING, MORENO, TOWNLEY)

3. Theoretical Mechanics.—An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies. An elementary treatment of Graphic Statics is included. The course is designed as a preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes the equivalent of course 1. Calculus must either precede this course or be taken at the same time. (This course was formerly numbered 6.) (I, II, III) Daily 10:15

5 units, both semesters (HOSKINS, MORENO, TOWNLEY)

In addition to the foregoing, which are required of all students of Engineering, the following elective courses are offered:

4. Adjustment of Observations.—Theory of the method of least squares, with applications. Credit in course 2 or its equivalent is a prerequisite. T. Th. 11:15 2 units, 2d semester (MORENO)

5. General Astronomy.—This course will consist of a general survey of the various branches of astronomy, including a study of the celestial sphere, the bodies of the solar system, comets, the fixed stars, and other heavenly bodies. The treatment will be essentially non-mathematical. M. W. F. 8:15 3 units, 1st semester (TOWNLEY)

5a. Practical Astronomy. The theory and practice of the determination of latitude, azimuth, time, and longitude. Intended especially to meet the requirements of students of civil engineering. Trigonometry and surveying are prerequisites. M. W. F. 11:15

3 units, 2d semester (TOWNLEY)

6. Graduate Courses.—Advanced courses in Theoretical Mechanics, Hydromechanics, Theory of the Potential Function, Theory of Elasticity, or other subjects, may be arranged for students having the requisite mathematical training.

PHYSICS

FERNANDO SANFORD, Professor.
FREDERICK JOHN ROGERS, ELMER REGINALD DREW, JOSEPH GRANT BROWN, Assistant Professors.

Courses 1, 2, 3, 4, and 5 constitute a course in General Physics, and are intended to precede the advanced courses.

1. Dynamics.—Including hydrostatics and pneumatics. Open only to students who have had Algebra and Plane Geometry. Required as a preparation for each of the courses following (except 6 and 7). One lecture and two laboratory periods per week. Lec. W. 1:30; Lab. (I) T. Th. 9:15-12:15, (II) Th. F. 1:30-4:30

3 units, either semester (BROWN)

2. Electricity and Magnetism.—One lecture and two or three laboratory periods per week. Prerequisite: course 1, or its equivalent. Lec. F. 1:30; Lab. W. Th. F. 1:30-4:30

3 or 4 units, 2d semester (DREW)

3. Heat.—One lecture and two laboratory periods per week. Prerequisite: course 1. Lec. T. 10:15; Lab. M. T. 1:30-4:30

3 units, 2d semester (SANFORD)

4. Sound.—Including wave-motion. One lecture and two laboratory periods per week. Prerequisite: course 1, and Trigonometry. Lab. M. T. 1:30-4:30; Lec. to be arranged

3 units, 1st semester (BROWN)

5. Elementary Optics.—Three laboratory periods per week. Prerequisites: course 1, and Trigonometry. W. Th. F. 1:30-4:30

3 units, 1st semester (SANFORD)

6. Engineering Physics.—Intended especially for students in Mechanical and Electrical Engineering. Three experimental lectures and recitations and one laboratory period per week. Prerequisite: entrance Physics, and course 3 in Applied Mathematics, or may be taken concurrently with Theoretical Mechanics.

a. Heat, Light and Sound. Lec. M. W. F. 11:15; Lab. M. or T. or F. 1:30-4:30 4 units, 1st semester (DREW)

b. Electricity and Magnetism. Lec. M. W. F. 11:15; Lab. M. or T. 1:30-4:30 4 units, 2d semester (ROGERS)

7. Physics for Students of Biology.—A general, non-mathematical course in Physics intended especially for students in Biological Science and students preparing for the study of Medicine. Two lectures and two laboratory periods per week throughout the year.

a. Electricity and Optics. Lec. M. W. 10:15; Lab. M. T. 1:30-4:30
4 units, 1st semester (DREW, ROGERS)

b. Molecular Physics, Heat and Sound. Lec. M. W. 10:15; Lab. M. T. 1:30-4:30 4 units, 2d semester (SANFORD)

8. Mechanical Measurements.—A course in exact measurements of mass, length, time, and gravity, using balance, dividing engine, cathetometer, chronograph, etc. Two laboratory periods per week. Prerequisite: course 1. M. T. 1:30-4:30
2 units, 2d semester (BROWN)

9. Electrical Measurements.—Open to students who have taken course 2 or course 6*b*. Lec. Th. 8:15; Lab. M. T. W. 1:30-4:30
4 units, 1st semester (ROGERS)

10. Advanced Optics.—Two laboratory periods per week. Prerequisite: course 5. M. T. 1:30-4:30
2 units, 2d semester (SANFORD)

11. General Physics.—Lectures. Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent. M. T. Th. F. 11:15
4 units, both semesters (SANFORD)

12. Analytic Mechanics.—Lectures. Prerequisites: course 1 and the Differential and Integral Calculus.
4 units, 2d semester (DREW)

13. Teachers' Course in Elementary Physics.—Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent. F. 10:15
1 unit, both semesters (SANFORD)

14. General Thermodynamics.—Prerequisites: Calculus and course 3, or its equivalent. 3 units, 1st semester (DREW)

15. Vibratory Motion.—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. A knowledge of Differential and Integral Calculus is required. T. W. F. 8:15 3 units, 1st semester (ROGERS)

16. The Kinetic Theory of Gases.—Prerequisites: Calculus, and course 3 or its equivalent. 2 units, 2d semester (ROGERS)

17. History of Physics.—Lectures and readings on the history of physical science with special reference to the development of theories. Prerequisites: courses 1, 2, 3, 4, and 5.
2 units, 2d semester (ROGERS)

18. Electrical Theory.—Prerequisites: course 2 or 6*b*, and Calculus. M. W. F. 11:15 3 units, 1st semester (DREW)

19. Investigation of Original Problems in the Laboratory.—Hours to be determined in each case. (SANFORD)

The Teacher's Recommendation.—The minimum requirement is courses 1, 2, 3, 4, 5, or an equivalent, and course 13.

Laboratory Fees.—Courses 1, 2, 3, 4, 5, 7, and 8, $4 each, per semester; courses 6*a*, and 6*b*, $3 each, per semester; course 9, $5 per semester; course 19, $2 per unit per semester.

CHEMISTRY

JOHN MAXSON STILLMAN, LIONEL REMOND LENOX, EDWARD CURTIS FRANKLIN, STEWART WOODFORD YOUNG, Professors.

ROBERT ECKLES SWAIN, Associate Professor.

JOHN PEARCE MITCHELL, WILLIAM HENRY SLOAN, WILLIAM GEORGE BATEMAN, Instructors.

EDWARD WALDO RICE, LOVELL LANGSTROTH, JOHN FRANKLIN ELLIS, ———, ———, ———, ———, Assistants.

I. LECTURE COURSES

1. General Inorganic Chemistry.—Comprising a systematic treatment of elementary principles and of the properties of the more important elements and their compounds. In connection with laboratory course *a*, and open to all students. Those not having entrance credit in Chemistry will register in a three-hour section for the first semester. (I) M. W. F. 8:15; (II) T. Th. 11:15
2 or 3 units, 1st semester; 2 units, 2d semester (SWAIN, MITCHELL)

2. Principles of General and Inorganic Chemistry.—Discussion of the elements of chemical theories and of important generalizations in the field of inorganic chemistry. Open to all students who have completed courses 1 and *a*. M. W. F. 11:15
3 units, both semesters (STILLMAN)

3. Organic Chemistry.—Lectures and reviews on the chemistry of carbon compounds. Open to students who have completed courses 1 and *a*. T. Th. 10:15 2 units, both semesters (FRANKLIN)

4. Industrial Chemistry.—Lectures on fuels, water, acid and alkali manufacturing, explosives, sugar-making and refining, petroleum. Lectures in this course are also given by Professor FRANKLIN (Dyes). Open to students who have completed courses 2 and 3; or may be taken concurrently with course 3. M. F. 9:15
2 units, both semesters (STILLMAN)

5. **History of Chemistry.**—Open to students who have completed courses 2 and 3. [Not given in 1908-09.]
2 units, 1st semesters, in alternate years (STILLMAN)

6. **Qualitative Analysis.**—In connection with laboratory course *b*. T. 1:30 1 unit, either semester (LENOX)

7. **Advanced Organic Chemistry.**—Advanced topics in organic chemistry, including stereochemistry. Open to students who have completed course 3. [Given in 1908-09.] T. Th. 8:15
2 units, both semesters, in alternate years (FRANKLIN)

8. **General Physical Chemistry.**—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed courses 2 and *d* in Chemistry, courses 4 and 9 in Mathematics, and course 1 in Physics (course 2 being also recommended). M. W. F. 8:15 3 units, both semesters (YOUNG)

9. **Physical-Chemical Measurements.**—An informal course of lectures given as needed in connection with course *f*.
No credit (YOUNG)

10. **Theories of Analytical Chemistry.**—W. 3:30
1 unit, 2d semester (YOUNG)

11. **Physiological Chemistry.**—A brief survey of the field of physiological chemistry. Open to students who have completed courses 3 and *d*, and Physiology 1. T. Th. 8:15
2 units, both semesters (SWAIN)

12. **Seminary in Chemistry.** Discussion of assigned topics in theoretical and general chemistry. Open to graduate students, and to advanced undergraduates in Chemistry, with the approval of the Faculty in Chemistry. 2d and 4th W. 3:30-5 1 unit, both semesters

II. LABORATORY COURSES

a. **General Inorganic Chemistry.** In connection with course 1.

a I. Illustrating fundamental laws and principles of elementary chemistry, for students who have not received entrance credit in Chemistry. M. T. or Th. F. 1:30-4:30
2 afternoons, 1st semester (SWAIN, MITCHELL)

a II. Inorganic preparations and general chemistry. For students who either have completed *a* I or have received entrance credit in Chemistry. M. T. or Th. F. 1:30-4:30
2 afternoons, either semester (SWAIN, MITCHELL)

b. Qualitative Analysis.—Open to students who have completed courses 1 and *a*.

3 afternoons, either semester (LENOX, BATEMAN)

c. Preparation of Typical Carbon Compounds.—Open in connection with course 3 to students who have completed course *b*.

3 afternoons, either semester (FRANKLIN)

d. Quantitative Analysis.—Training in manipulation in gravimetric and volumetric methods. Work begins either semester. Students in other departments than Chemistry may register for three afternoons if they cannot arrange for four, as is recommended. Open to students who have completed courses 6 and *b*. Lec. T. 1:30; Lab. by arrangement 4 afternoons, either semester (STILLMAN, SLOAN)

e. Mineral Analysis.—Systematic analysis of representative minerals. Open to students who have completed course *d*, and required of students whose major subject is Chemistry, unless *f* or *g* be elected instead.

4 afternoons, either semester (STILLMAN, LENOX, SLOAN)

f. Physical-Chemical Measurements.—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking course 8, and who have completed course *d*.

3 or 5 units, either semester (YOUNG)

g. Physiological Chemistry.—A laboratory course embracing a study of the various tissues and fluids of the body and of the chemistry of digestion and excretion. Requirements as under lecture course 11.

3 afternoons, both semesters (SWAIN)

h. Assaying.—Open to students who have completed course *d*. Lec. W. 1:30; Lab. by arrangement

3 afternoons, either semester (LENOX)

x. Advanced and Special Courses in laboratory work and research work are open to students who have completed necessary prerequisites, by arrangement with professors of the Department and with reference to the particular aims and ambitions of the students. Such advanced or special subjects are, for example, special methods in mineral analysis, iron and steel analysis; special methods in assaying; water analysis; food analysis; urine analysis; elementary organic analysis; special organic preparations; analysis of sugar, etc.

Qualified students may also pursue investigations of problems in inorganic, organic, physical, analytical, or physiological chemistry under the direction of any professor with whom arrangement is made.

For all such advanced, special, or research work, students will register and enroll under *x*, giving name of professor under whom the work is to be carried on, and for such number of units of credit as may be agreed upon.

Candidates for the degree of Bachelor of Arts in Chemistry may select any one of the four following courses (A, B, C, D), the requirements of the Department being as follows:

A. General Chemistry

First Year:—Chemistry 1, *a;* Physics 1; Mathematics 3; German 1.

Second Year:—Chemistry 2, 6, *b;* Mathematics 9; German 2*a*.

Third and Fourth Years:—Chemistry *d*, 3, *c*, 8, *f*.

Course A is recommended for all who are studying the science of chemistry for its own sake or for the profession of teaching.

B. Analytical Chemistry

First Year:—Chemistry 1, *a;* Physics 1; German 1.

Second Year:—Chemistry 2, 6, *b;* Geology 1, 2; German 2*a*.

Third and Fourth Years:—Chemistry *d*, *e*, *c*, *h*, 3, 10; Geology 5.

Course B is particularly adapted to students who are looking forward to the career of analytical chemist and assayer.

C. Medical or Sanitary Chemistry

First Year:—Chemistry 1, *a;* Physiology 1; German 1.

Second Year:—Chemistry 2, 6, *b;* Physics 1; German 2*a*.

Third and Fourth Years:—Chemistry 3, *c*, *d*, 11, *g*.

Course C is particularly adapted to students who are looking forward to medical education or to sanitary chemistry.

D. Chemical Engineering

This course comprises four years of the necessary five years' work leading to the advanced degree of *Engineer* in Chemical Engineering. Candidates in this course receive the degree of A. B. in Chemistry upon completion of the following requirements:

First Year:—Chemistry 1, *a;* Applied Mathematics A, B, 1; German 1.

Second Year:—Chemistry 2, 6, *b*, *d;* Applied Mathematics 2, 3.

Third Year:—Chemistry 3, *c;* Engineering 1*a*, 1*b*, 2; Physics 1, 2 (or 6, 7); German 2*a*.

Fourth Year:—Chemistry 4, *e* (or *h*); Mechanical Engineering 2, 3*a*, 3*c;* Geology 11*c;* Engineering 3*a*.

Course D is intended particularly for students who are working

toward the degree of Chemical Engineer and who desire to fit themselves for positions of responsibility in connection with the administration of industries involving chemical knowledge and skill.

Advanced Degrees

Applicants for the degree of *Master of Arts* in Chemistry will be expected to complete, in addition to the requirements for the bachelor's degree, the equivalent of thirty units' work in the University—of which approximately two-thirds must be in the Department. This work will include a thesis based on laboratory work, and chemistry 8 and *f*, if not included in the undergraduate work.

Candidates for the advanced degree of *Engineer* in Chemical Engineering will be required to complete, in addition to the requirements for the A. B. degree specified under course D: Mechanical Engineering 4, 6 (first semester of the course), 9, 8 (2 afternoons per week for one semester), Chemistry 8, and a thesis based on laboratory work. Electrical Engineering 1 is advised, if possible, though not required. It is estimated that these requirements may be completed in one year after the completion of the requirements under Course D.

Candidates for the degree of *Doctor of Philosophy* in Chemistry, after the completion of the equivalent of the requirements for Master of Arts or Engineer, will follow such courses as are approved by the Department faculty, subject to general University regulations.

The Teacher's Recommendation.—The minimum requirement for the high school teacher's recommendation in Chemistry is courses 1 and *a* (Elementary and General Inorganic, lectures and laboratory), the first half of course 2 (Principles of Chemistry), and either the second half of course 2, or courses 6 and *b* (Qualitative Analysis, lectures and laboratory).

Laboratory Fees.—A charge of twenty-five dollars per semester will be made to students in each laboratory course of not more than four units registration. Of this charge five dollars per semester in assaying, and ten dollars per semester in the other courses, is returnable, less bills for breakage and loss of apparatus.

BOTANY

DOUGLAS HOUGHTON CAMPBELL, Professor
GEORGE JAMES PEIRCE, Associate Professor.
RICHARD MORRIS HOLMAN, Acting Instructor.

1. Elementary Botany.—Study of representatives of the principal groups of plants, with lectures upon special morphology and classification. (Campbell's University Text-book of Botany.) Lec. W. 1:30; Lab. M. T. or Th. F. 1:30-4:30

3 units, both semesters (CAMPBELL, PEIRCE, ————)

2. Algæ.—Lectures, reading, and laboratory work upon the special morphology and classification of the Algae. 1:30-4:30, by arrangement 5 units, 1st semester (CAMPBELL)

3. Archegoniatæ.—Special morphology and classification of the Archegoniatae. Continuation of course 2. 1:30-4:30, by arrangement 5 units, 2d semester (CAMPBELL)

4. Archegoniatæ.—Advanced work in special groups. 1:30-4:30, by arrangement 1st and 2d semesters (CAMPBELL)

5. Physiology.—Laboratory work, lectures, and reading on Respiration and Nutrition. (An elementary knowledge of Physics and Chemistry is a desirable preliminary to this course.) Lec. W. 2:30; Lab. M. T. 1:30-4:30 3 units, 1st semester (PEIRCE)

6. Elementary Bacteriology.—Laboratory work, lectures, and reading. Lec. W. 2:30; Lab. Th. F. 1:30-4:30

3 units, 2d semester (PEIRCE)

7. The General Physiology of Plants.—Lectures. Open to all. Th. 1:30 1 unit, 1st semester (PEIRCE)

8. The Evolution of Plant Forms.—Lectures. Open to all except first-year students. Th. 1:30 1 unit, 2d semester (CAMPBELL)

9. Physiology. Laboratory work, lectures, and reading on Growth, Irritability, and Reproduction. (An elementary knowledge of Physics and Chemistry is a desirable preliminary to this course.) Lec. W. 1:30; Lab. M. T. 1:30-4:30

3 units, 2d semester (PEIRCE)

10. Histology.—Lectures and laboratory work on the structure and development of the sporophyte tissues. Microtechnique.

3 units, 1st semester (————)

11. Cytology.—Lectures and laboratory work on the cell and cell organs. 3 units, 2d semester (————)

12. Advanced Work in Morphology and Physiology.—Intended especially for graduate students. (CAMPBELL, PEIRCE)

Course 1 must precede all other courses, except courses 7 and 8. Students making the subject a major must complete thirty-five units, including courses 1 to 3 and course 5, course 2 or course 3 in Systematic Botany, and also course 1 in Zoology, before graduation. Course 12 is intended especially for graduate students, and opportunities will be given such students for carrying on special lines of work upon original problems.

The Teacher's Recommendation.—The minimum requirement is course 1 and two additional courses.

Laboratory Fees.—Two dollars and a half for course 1; ten dollars for course 6; five dollars for courses 5 and 9; three dollars per semester for each of the other laboratory courses.

SYSTEMATIC BOTANY

WILLIAM RUSSELL DUDLEY, Professor.
LEROY ABRAMS, Assistant Professor.

Instruction in this Department chiefly relates to the Spermaphytes, their structure, affinities, and geographic distribution. The advanced work on the Fungi will also be given under its direction. Course 1, or its equivalent, and the Algæ and Archegoniatæ in General Botany, course 1 in Zoology, and course 1 in Entomology are required of students intending to graduate with Systematic Botany as a major study. Students are strongly advised to take Physiological Anatomy, and one course in Physiology by Professor PEIRCE.

1. Spermaphyta.—An elementary course in the morphology, histology, and affinities of the principal orders of flowering plants represented on the Pacific Slope. The laboratory work will be supplemented during the latter part of the course by field work and classification. Lec. T. 11:15; Lab. T. W. 1:30-4:30

3 units, both semesters (ABRAMS)

2. Geographical Distribution and Forest Botany.—Lectures on the orders containing trees and shrubs and on the principles of geographical distribution which they illustrate. Laboratory work, also preparation of herbarium specimens of woody plants, native and exotic. Lec. Th. 11:15; Lab. T. W. Th. 8:15-4:30, by arrangement

3 units, 2d semester (DUDLEY)

3. Fungi.—The laboratory work (three hours) will be devoted to morphology, development, and culture methods; the lectures to systematic relationships, with an account of economically important forms. Lec. Th. 11:15; Lab. T. W. Th. 8:15-4:30, by arrangement
4 units, 1st semester (DUDLEY)

4. Elementary Taxonomy.—This course consists of field and laboratory work, with special reference to the collection and determination of flowering plants. Lab. T. W. Th. 8:15-4:30, by arrangement
2 or more units, 2d semester (ABRAMS)

5. The Compositæ.—A study of representatives of the tribes of Compositæ, with reference to the general principles of classification. T. W. Th. 8:15-4:30, by arrangement
2 units, 1st semester (ABRAMS)

ADVANCED COURSES

6. Advanced Fungi.—The investigation of some group of fungi, which may be either a taxonomic or a biological study. T. W. Th. 8:15-4:30, by arrangement
2 or more units, either semester (DUDLEY)

7. Coniferæ.—A study of the Coniferæ, dealing especially with the classification and distribution of the North American species and regional distribution in other parts of the world. T. W. Th. 8:15-4:30, by arrangement 2 units, 1st semester (DUDLEY)

8. Phytogeography.—This course is intended for those students who wish to pursue further the studies undertaken in course 2. It will consist of laboratory, herbarium, and field studies of the trees and shrubs, with reference to their local distribution. T. W. Th. 8:15-4:30, by arrangement
2 or more units, either semester (DUDLEY, ABRAMS)

9. Special Taxonomy.—A critical study of some family or genus, with special reference to nomenclature and the methods of investigation. The laboratory and herbarium work will be supplemented by field work. T. W. Th. 8:15-4:30, by arrangement
2 or more units, either semester (DUDLEY, ABRAMS)

10. Graduate Work.—This includes investigation on a special subject in the Spermaphyta or Fungi, which may be either a systematic or a biological study. It is supplemented by reading, and a study of methods in bibliography. (DUDLEY, ABRAMS)

Several carefully planned excursions in the second semester, through the plant formations in the adjacent mountains, are made the subjects

of written reports by the students in course 2. Similar excursions are required in course 3.

The Herbarium consists largely of plants collected in Western America, and includes, besides purchases, considerable donations from the National Herbarium, the California Academy of Sciences, J. W. Congdon of Mariposa, and others. The considerable private collections of flowering plants and fungi belonging to the head of the Department are in constant use.

Laboratory Fees.—Laboratory fees for courses 1 and 3, three dollars; for the other courses, two dollars.

Courses Leading to Forestry

No instruction in technical forestry is given in the University; but a growing demand has led the Department to lay down courses for individual students in harmony with the preparatory requirements of the best forestry schools. Systematic Botany is made the major subject, with plant physiology and advanced work in the forest botany of the Pacific-Rocky Mountain region substituted for the algæ and archigoniatæ. Collateral study in Entomology is required, together with certain courses in Zoology, Geology, Mathematics, and other departments, and a reading knowledge of French and German. At the end of four years students have the advantage of a knowledge of Western plants, plant-formations, and climatic conditions in the most important field for applied American forestry, and a better scientific basis for their technical studies than is usually possessed by those pursuing work in the forestry schools.

PHYSIOLOGY AND HISTOLOGY

Oliver Peebles Jenkins, Professor.
Frank Mace McFarland, Associate Professor.
James Rollin Slonaker, Clara S. Stoltenberg, Assistant Professors.

Undergraduate Courses

1. General Anatomy and Physiology.—This course is designed to give a general view of the laws of the structure and the activity of organisms. The work will give occasion to discuss many questions of General Biology. It consists of: First, the study of the cell and its activities as shown in the unicellular organisms, in reproductive cells, and in individual cells of many tissues; second, the study of the laws and course of development resulting in higher differentiations in struc-

ture, and specializations in function, exhibited in a selected series of organisms, both animals and plants, of increasing complexity; third, the comparative study of the physiological processes of forms placed under widely different conditions. The latter part of the course is occupied with an introduction to the embryology, anatomy, and physiology of vertebrates. (One lecture and five laboratory hours a week.) Lec. M. 3:30, Lab. M. T. 1:30-4:30

3 units, both semesters (JENKINS, SLONAKER)

2. Physiology of Muscle, Blood, and Circulation.—To be preceded by course 1. An experimental course covering the ground represented in Foster's Physiology, Part I, or Howell's Text-book on the same subjects. (One lecture and five laboratory hours per week.) Lec. T. 9:15, Lab. Th. F. 1:30-4:00

3 units, 1st semester (SLONAKER)

3. Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism, and Nutrition.—Planned to follow course 2. An experimental course, with Foster's Physiology, Part II, and Howell's Text-book, as texts. (One lecture and five laboratory hours per week.) Lec. T. 9:15, Lab. Th. F. 1:30-4:00

3 units, 2d semester (SLONAKER)

4. Structure of the Nervous System.—The course consists of the dissection and comparative study of a series of vertebrate brains, including the human brain and cord, also the peripheral nervous system; abundant material is provided, also such necessary helps as the latest models and charts. For texts the student will use Quain, Edinger, and Barker. (One lecture and five laboratory hours per week.) Lec. F. 9:15, Lab. Th. F. 1:30-4:30 3 units, 1st semester (STOLTENBERG)

4b. Structure of the Nervous System.—Advanced course. Open to those who have taken courses 4 and 5.

2 units, 2d semester (STOLTENBERG)

5. Histology of the Nervous System and Sense Organs.—The course includes also the anatomy of the sense organs. It is planned to accompany course 4, the two being designed to give the gross and minute anatomy of the central and peripheral nervous systems and sense organs. The texts necessary for the student's use are Quain and Barker. (One lecture and five laboratory hours per week.) Lec. W. 9:15, Lab. W. 1:30-4:00 (and one other period to be arranged)

3 units, 1st semester (STOLTENBERG)

6. Physiology of the Nervous System and Sense Organs.—An experimental course in these subjects, designed to follow courses 4

and 5. Texts: Foster, Howell's Text-book. (One lecture and five laboratory hours per week.) Lec. Th. 9:15, Lab. Th. F. 1:30-4:00
3 units, 2d semester (JENKINS)

7. The Vertebrate Eye.—A comparative study of the structure and physiology of the eyes of vertebrates, giving special attention to the retina. Open to advanced students. (Lecture and laboratory work, six hours per week.) 10:15 by arrangement
2 units, 2d semester (SLONAKER)

8. Special Courses in Physiology.—Advanced courses open only to those who have had courses 1, 2, 3, 4, 5, and 6. They are arranged for the advanced study of selected subjects in physiology, or as a drill in the methods of research. The work will be planned for the individual student, the time varying with the exigencies of the case. 1:30-4:30 by arrangement 2 to 5 units, both semesters (JENKINS)

9. Histology.—The study of the structure of the cell and its general phenomena, the fundamental tissues and the outline of their development in a comparative way, occupy the first semester. In the second, the microscopic anatomy of organs, except those of the nervous system and special senses [see courses 4 and 5], is dealt with. Elementary histological technique is taught during the course. Prerequisite: course 1, or its equivalent. Physiology majors are advised to take courses 2, 3, and 9 together. (One lecture and six laboratory hours per week.) Lab. T. Th. 9:15-12:15 and W. Th. F. 1:30-4:30
3 units, both semesters (MCFARLAND)

10. Histogenesis.—A course in advanced Histology for students who have completed courses 1 and 9, and in addition the first semester of Vertebrate Embryology (Zoology 7). It comprises the comparative study of the histogenesis of the fundamental vertebrate tissues and organs. (One lecture per week, minimum laboratory work six hours per week.) Lec. Th. 8:15, Lab. W. Th. F. 1:30-4:30
3 units, 1st semester (MCFARLAND)

11. Neurocytology.—A comparative study of the minute structure of the nerve cell and nerve fibre, the neurone theory, and the question of functional alterations of structure during normal activity and artificial stimulation. (One lecture and at least six laboratory hours per week.) Open to advanced students. [Not to be given in 1908-09.]
3 to 5 units, 2d semester, in alternate years (MCFARLAND)

12. Cellular Biology.—A course in Cytology dealing with the structure and functions of the cell, with special reference to the reproductive processes in unicellular and multicellular organisms, and the

theories connected therewith. Open to advanced students. (Two lectures per week, with demonstrations and laboratory work.) Lec. T. 8:15, Lab. W. Th. F. 1:30-4:30

3 to 5 units, 2d semester, in alternate years (McFarland)

13. Anatomy.—This course consists of twelve weeks' study of human osteology, with a brief comparative study of skeletons of vertebrates. The remaining six weeks is given to mammalian myology, angiology, and splanchnology (dog, cat, rabbit). [For anatomy of nervous system and sense organs, see courses 4 and 5.] Lec. 11:15, Lab. T. W. 1:30-4:30 2 to 5 units, 2d semester (———)

14. Special Courses in Histology.—Advanced courses in Histology and Microscopic Anatomy will be arranged for individual students, with a view to giving drill in methods of research. Open only to those who have had courses 1, 5, and 9. 11:15 by arrangement

2 to 5 units, both semesters (McFarland)

15. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. M. 9:15 1 unit, both semesters

16. Seminary in Physiology and Histology.—Open to graduate students. W. 4:00 2 units, both semesters

17. Research in Physiology or Histology.—By arrangement

(Jenkins, McFarland, Slonaker, Stoltenberg)

Candidates for the Bachelor's degree who select Physiology and Histology as a major will be expected to take courses 1, 2, 3, 4, 5, 6, 9, and 15, and at least five units to be made up from the other courses offered; and in addition courses 1 and *a* in Chemistry, one year in Physics (see course 7), and the first semester in Embryology (course 7 in Zoology).

Laboratory Unit of Credit.—In those courses in which definite laboratory time is not fixed, three hours of laboratory work per week through one semester are taken as the equivalent of one unit of credit.

The Teacher's Recommendation.—Students who wish the Department recommendation for High School teaching in Physiology are expected to complete the first two years' work (courses 1, 2, 3, and 9).

Laboratory Fees.—Seven dollars per semester, except for course 1, in which the fee is five dollars per semester.

Graduate Courses

The graduate work of the Department is included in the courses numbered 4*b*, 7, 8, 10, 11, 12, 14, 15, 16, and 17. Undergraduate students

may elect such of these courses as they are prepared to take, but credit recorded in undergraduate standing will not count toward a higher degree. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject, the choice of such minor will be guided by the needs of the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

Preparation for the Study of Medicine.

Students intending to enter on the study of Medicine are advised to take Physiology and Histology as a major subject, with Chemistry, Physics, Comparative Anatomy of the Vertebrates, and Hygiene among the collateral subjects. Such a course gives that foundation both in scientific knowledge and in skill in experimental Physiology, and in Histological and Anatomical technique, which will make it possible to accomplish the medical course of the best medical schools with greater advantage. The courses required for graduation in the Department include both the premedical requirements of the Medical Schools of the highest grade and certain subjects for which advanced standing may be obtained in those schools, either by certificate or by examination.

HYGIENE

William Freeman Snow, Associate Professor.
Royce Reed Long, Instructor.
Florence Bolton, Vera Townsend, Acting Instructors.
Ella Craig Russ, Assistant.
John Frye Chapman, Eugene Garrison McCann, Archibald F. Meston, James Root Dillon, Olive Louisa Streeter, Gymnasium Assistants.

General Education Courses

The following courses are useful to the major students of all departments by affording them an opportunity to learn the practical application of science to the requirements of personal and public health. The regular work of the Department is given below under "Department Courses."

1. Personal Hygiene.

a. Gymnasium.—Three exercise hours per week in the gymnasium and its open-air divisions. Open to all students. Registration may be repeated each semester, but each student must show steady progress toward his highest physical efficiency. General strength, skill, and endurance tests must be passed before work is permitted in the various team and personal contest games.

1 unit, each semester

(Encina Gymnasium, LONG; Roble Gymnasium, TOWNSEND)

b. Laboratory.—Practical instruction in the investigation of one's environment, the development of bodily resistance to disease, and the prophylaxis of the infectious diseases. Field trips are required to markets, dairies, boarding houses, and places of similar importance. Open to all students registered in course 1*a*.

1 unit, both semesters (LONG, TOWNSEND)

2. Public Health.—Lectures on the principles of public and industrial hygiene, and quarantine methods. The course includes required trips to the federal and municipal health departments in the vicinity of the San Francisco harbor, to various hospitals, and to laboratories for the preparation of vaccines and serums. Students who have had course 1 in Physiology, Botany, or Zoology may register for one laboratory period. Not open to first-year students.

2 or 3 units, either semester (SNOW)

DEPARTMENT COURSES

3. Industrial Hygiene.—A study of the effects of occupation on the health of individuals employed in the representative industries, trades, and professions. Occasional lectures, reading, and individual inspection work. A number of large industrial enterprises in the vicinity of San Francisco arrange annually for class inspection trips. Prerequisite: course 2. 3 units, 1st semester (SNOW)

4. Physical Training Methods.—Open only to specially qualified students who wish to obtain the departmental recommendation for teachers of physical training. A progressive laboratory course is offered in the methods of examining students, and estimating their endurance and adaptability to various forms of exercise and sport. Regular practice is required in the application of the course to gymnasium instruction, athletic coaching and training, and the teaching of personal contest sports. One laboratory and two practice hours each week. Registration may be repeated by special arrangement with the instructors. 1 unit, each semester (LONG, BOLTON)

5. Epidemiology.—Each student is required to make a detailed study of a selected series of epidemics and of the vital statistics of assigned cities and States. The purpose of the course is to give the student practical experience in the use of epidemiological literature and methods of analysis. Open to students preparing for medicine or some phase of the public health service. Prerequisite: course 3.
3 units, 2d semester (SNOW)

6a. Hygienic Laboratory Technique.—Training in the methods employed in Public Health Laboratories. Prerequisites: Hygiene 5, epidemiology; Chemistry 6, qualitative chemistry; Botany 6, bacteriology; Physiology 3. 3 units, 1st semester (SNOW)

6b. Sanitary Survey.—Training in the methods of field inspection and sanitary charting employed by officers of the public health service. Prerequisite: Hygiene *6a*. 3 units, 2d semester (SNOW)

PREPARATION FOR THE TEACHING OF PHYSICAL TRAINING

A departmental recommendation will be given to students of exceptional ability who have acquired a thorough foundation in Physiology and have completed at least six units of work in Hygiene 4.

PREPARATION FOR THE PUBLIC HEALTH SERVICE

A departmental recommendation will also be given to students desiring to qualify for the public health service as sanitary inspectors, statisticians, disinfectors, quarantine or laboratory assistants, when a sufficient amount of work has been completed to justify the recommendation.

The department does not accept major students, but the department courses have been arranged with reference to the premedical work of students who plan careers as health officers or sanitary experts.

Laboratory Fees.—Two dollars per semester for courses 1*a*, 1*b*, 2 (laboratory), and 5; three dollars per semester for courses *6a* and *6b*.

ZOOLOGY

CHARLES HENRY GILBERT, Professor.
GEORGE CLINTON PRICE, HAROLD HEATH, Associate Professors.
JOHN OTTERBEIN SNYDER, EDWIN CHAPIN STARKS, Assistant Professors.
WALTER KENRICK FISHER, Instructor.

1. Elementary Zoology.—A laboratory course involving the study of representatives of the principal groups of animals, accompanied by

lectures on their structure and classification, and on the general laws of biology which they illustrate. Lec. W. 2:30; Lab. Th. F. 1:30-4:30
3 units, both semesters (PRICE)

2. The Invertebrates.—This course, following the first year's work, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups. Lec. by arrangement; Lab. M. T. 1:30-4:30
3 units, both semesters (HEATH)

3. Invertebrate Embryology.—A study of segmentation, the formation of the germ layers, and certain phases of the later development, including the significance of larval forms and the relationships of the principal phyla. Must be preceded by courses 1 and 2. Th. F. 1:30-4:30
2 units, both semesters (beginning 2d semester) (HEATH)

4. Advanced Work on Invertebrates.—The original investigation of problems connected with the anatomy and embryology of invertebrates. By arrangement 2 to 5 units, both semesters (HEATH)

5. Microscopical Anatomy.—A study of the fundamental animal tissues, with drill in microscopical technique. M. T. 1:30-4:30
2 units, 1st semester (HEATH)

6. Classification of the Invertebrates.—A course designed to give a wider acquaintance with marine invertebrates; includes also consideration of geographical distribution, habits, and the collection and preservation of specimens. Must be preceded by course 1. M. T. W. 1:30-4:30
3 units, both semesters (FISHER)

7. Special Systematic Work on Invertebrates.—Original investigation of problems connected with the classification of invertebrates. By arrangement 2 or 3 units, both semesters (FISHER)

8. The Vertebrates.—A general course in the classification of vertebrate animals, with studies in the habits and the geographical distribution of species. The course will include field excursions and a study of the methods of collecting and preserving specimens. Lec. Th. 2:30; Lab. Th. F. 1:30-4:30 2 units, both semesters (SNYDER)

9. Comparative Anatomy of the Vertebrates.—A more detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates, with comparative studies in vertebrate osteology, the nervous and circulatory systems, etc. W. Th. F. 1:30-4:30 3 units, both semesters (SNYDER)

10. Vertebrate Embryology.—Development of the chick through the first three days of incubation. Lec. M. 1:30; Lab. M. T. 1:30-4:30
2 units, 1st semester (PRICE)

11. Vertebrate Embryology.—A study of the early stages of the development of the various classes of vertebrates, special stress being laid upon the formation of the germ-layers. M. T. 1:30-4:30
2 units, 2d semester (PRICE)

12. Fœtal Anatomy.—Later development of vertebrates, including such subjects as the metamorphosis of the circulatory and urogenital systems. The work will be devoted largely to the mammals. M. T. 1:30-4:30 2 units, 2d semester (PRICE)

13. Ichthyology.—A course of lectures and laboratory work, including an examination of the larger groups of fishes with special reference to the characters on which they are based, and including practical work in the discrimination of species. M. T. W. 1:30-4:30
2 units, both semesters (GILBERT, STARKS)

14. Advanced Ichthyology.—Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work. By arrangement
2 to 5 units, both semesters (GILBERT)

15. Journal Club.—Open to seniors and graduate students. T. 4-6 2 units, both semesters (GILBERT)

Major students must before graduation complete courses 1, 2, 9, 10, 13, 15, the first semester of course 3, one advanced course in Zoology, and course 1 in Botany.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

The Teacher's Recommendation.—The Department recommendation for High School teaching in Zoology requires the completion of the following subjects: Elementary Zoology, 6 units; the Invertebrates, 6 units; the Vertebrates, 4 units; Comparative Anatomy of the Vertebrates, 6 units.

THE ZOOLOGICAL COLLECTIONS

The ZOOLOGICAL MUSEUM contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galapagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds,

and mammals of California and adjoining states. The collection of marine invertebrates is rich in Pacific echinoderms and crustacea, and contains a good working nucleus in the other principal groups. The series of deep-sea forms is especially valuable.

Laboratory Fees.—All laboratory courses, three dollars each per semester.

ENTOMOLOGY AND BIONOMICS

Vernon Lyman Kellogg, Professor.
Mary Isabel McCracken, Robert Earl Richardson, Instructors.
Rennie Wilbur Doane, Instructor and Curator.
David Starr Jordan, Lecturer.

ENTOMOLOGY

1. Elementary Entomology.—The elementary study of insect structure, development, and classification, including practice in collecting and preserving specimens. Any forenoon hours
3 units, either semester (McCracken)

1a. Morphology and Physiology of Insects.—Continuation of the preceding course, devoted to the study of the metamorphosis, comparative morphology, and special physiology of insects. Any forenoon hours 3 units, either semester (McCracken)

2. Classification and Development of Insects.—Continuation of the preceding courses, devoted especially to a rapid study of the present-day classification into orders, families, and genera of the insect class, and to a study of the characteristics of the life history of insects of all the different orders. Forenoon hours
2 units, both semesters (McCracken)

3. Economic Entomology: Forest Insects.—A study of the insect enemies of forest and shade trees. The course includes field, laboratory, and bibliographic work. Must be preceded by courses 1 and 1*a*. Forenoon hours 2 or 3 units, 1st semester (Doane)

3a. Economic Entomology: Orchard and Garden Insects.—A study of the principal injurious and beneficial insects of the orchard and garden. Includes field, laboratory, and bibliographic work, and a weekly lecture on the history, principles, and practice of economic entomology. Must be preceded by courses 1 and 1*a*. Forenoon hours
2 or 3 units, 2d semester (Doane)

4. Economic Entomology: Coccidæ (the scale insects).—A study

of the classification, general biology, and economic relations of the scale insects, with particular attention to the more important injurious ones of the Pacific Coast. Field, laboratory, and bibliographic work, with occasional lectures. Must be preceded by courses 1 and 1*a*. Forenoon hours 2 or 3 units, either semester (DOANE)

5. General Entomology.—A course of lectures and demonstrations. Open to students who have had some work in Biology (Zoology, Botany, or Physiology). T. 9:15 1 unit, 2d semester (KELLOGG)

6. Insects and Disease.—A course on the relations of insects to the dissemination of disease in man and the domestic animals. One lecture and one or two laboratory periods a week. Open to students of some previous laboratory training in biology. Lec. Th. 9:15; Lab. forenoon hours 2 or 3 units, 2d semester (KELLOGG)

7. Advanced Work.—Advanced study and investigation of the biology of insects. Laboratory and field work. By arrangement 2 to 5 units, both semesters (KELLOGG)

Work for graduate and special students will be specially arranged.

Major students in Entomology must obtain before graduation twenty-eight units' credit in Entomology, and credit for course 1 in Zoology, and course 1 in Botany, making forty units in biological subjects. Some previous work in Biology should be done before taking up any course in Entomology.

The *Entomological Collections* contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidæ (scale insects), and a valuable series of specimens from the Galapagos Islands.

BIONOMICS

8. Organic Evolution.—Lectures on the laws or principles of biology and the factors in organic evolution. Not open to first-year students. Certain lectures in this course are given by Mr. LUTHER BURBANK. M. W. 10:15 1 or 2 units, both semesters (JORDAN, KELLOGG)

9. Variation and Heredity.—Special pieces of work, on variation and heredity in insects, arranged for qualified students. This work includes the collecting and rearing of series of individuals under con-

trolled breeding and environmental conditions, and the statistical and quantitative study of the variation in these series. [Details as to credit and work hours to be arranged.] (Kellogg)

Laboratory Fees.—Three dollars per semester for each laboratory student.

GEOLOGY AND MINING

John Casper Branner, James Perrin Smith, Professors.
John Flesher Newsom, Associate Professor.
Dorsey Alfred Lyon, Austin Flint Rogers, James F. McClelland, Assistant Professors.
Luther William Bahney, Instructor.
Donald Steel, Roy Seldon Kellogg, Frank Warren Turner, Assistants.

Students intending to make Geology and Mining their major subject should offer, as a part of their entrance preparation, solid geometry, trigonometry, advanced algebra,* physics, chemistry, zoology, and French or German, or both; otherwise the mathematics, physics, chemistry, and language must be taken in the University.

Requirements for Degrees†

Bachelor of Arts

The following is a general summary of the courses that lead to the degree of Bachelor of Arts in Geology and Mining for students graduating prior to 1911.

First Year—Applied Mathematics 1 (10 units); Chemistry 1, *a*, 6, *b* (10 units); Engineering 1*a*, 1*b* (6 units); Physics 7 (4 units). Total, 30 units.

(None of the first-year subjects offered in the second semester can be taken without the first semester's work. First-year students can therefore advantageously enter the course as outlined above only at the beginning of the first semester.)

Second Year—Applied Mathematics 2, 3 (16 units); Chemistry, *d* (3 units); Civil Engineering 4*a* (5 units); Geology and Mining 5 (6 units); Mechanical Engineering 2 (2 units). Total, 32 units.

Third Year—Engineering, 2, 3*a* (8 units); Mechanical Engineering

* Students presenting trigonometry and advanced algebra as entrance subjects are required to pass a satisfactory special examination in those subjects; otherwise the corresponding courses in Applied Mathematics must be taken during the first year in the University.

† Not applicable to students in pure geology.

3*c*, 6 (7 units); Geology and Mining 1, 2, 3*, 4*, 6, 9, 11*a*, 11*b* (20 units). Total, 35 units.

Fourth Year—Geology and Mining 7*a* or 7*b*, 10*a*, 10*b* (11 units); Chemistry *e* or Geology and Mining 11*e* (3 units), Civil Engineering 8*c* (3 units); Mechanical Engineering 8*d*, 9 (4 units); Electrical Engineering 1 (4 units). Total, 25 units.

Engineer

The following is a summary of courses that will lead to the degree of Engineer, for students entering the Department during and after 1907:

Chemistry.—1*a* General Inorganic (lectures, 4 units; Laboratory, 2 units); 6, *b* Qualitative Analysis (lectures, 1 unit; Laboratory, 3 units); *d* Quantitative Analysis (4 units). Total, 14 units.

Physics.—6 Engineering Physics, 8 units.

Applied Mathematics.—1 first-year Mathematics: Algebra, Trigonometry, and Co-ordinate Geometry (10 units); 2 Calculus (6 units); 3 Theoretical Mechanics (10 units). Total, 26 units.

Engineering.—1*a* Linear Drawing and Lettering (1 unit); 1*b* Descriptive Geometry (5 units); 2 Mechanics of Materials, Testing of Materials (5 units); Hydraulics (3 units). Total, 14 units.

Civil Engineering.—4*a* Elementary Surveying, 5 units.

Mechanical Engineering.—1*c* Forge Work (2 units); 2 Elementary Machine Drawing (2 units); 4*a* Machine Design (5 units); 6*a* Heat Engines (3 units); 8*d* Experimental Engineering (3 units); 10 The Mechanical Engineering of Central Power Stations (2 units). Total, 17 units.

Electrical Engineering.—1 Elements of Electrical Engineering, 4 units.

Geology and Mining.—1 Dynamic and Structural Geology (3 units); 2 Economic Geology (4 units); 3 Topographic Geology, Summer (3 units); 4 Field Geology, Summer (5 units); 5 Mineralogy (6 units); 6 Petrography (4 units); 7 Paleontology, Historical Geology (4 units); 9 Assaying (3 units); 10*a* Mining (5 units); 10*b* Mine Plant (5 units); 10*c* Design of Mine Plant (3 units); 10*d* Ore Dressing, lectures (3 units); 10*e* Mine Engineering (2 units); 10*f* Mine Thesis; 10*g* Summer Mining; 11*a* Metallurgy (4 units); 11*b* General Metallurgical Laboratory (2 units); 11*c* Metallurgical Laboratory (3 to 5 units, optional). Total, 56 to 61.

General Courses.—History (4 to 6 units); French, German, or

Spanish (6 units); English (6 units); Economics (6 units); Law (4 to 6 units). Total, 26 to 30 units.

COURSES OF INSTRUCTION

1. Dynamic and Structural Geology.—Lectures, with syllabus. M. W. F. 8:15 3 units, 1st semester (BRANNER)

1a. Physiography.—Lectures, with syllabus. W. 8:15 1 unit, 2d semester (BRANNER)

2. Economic Geology.—Lectures, with syllabus. Open to students who have completed course 1. T. Th. 8:15 2 units, 2d semester (NEWSOM)

3. Topographic Geology.—Field and laboratory work, with the construction of geologic maps and sections. Open to students who have completed course 1 in Geology, and course 4*b* in Civil Engineering. 4 units, summer vacation (NEWSOM)

4. Field Geology.—Field practice in working out geology in the field and its representation upon topographic maps and sections. Prerequisites: Geology 1*b*, 5, and Civil Engineering 4*b*. 5 units, summer vacation (NEWSOM, ROGERS)

5. Mineralogy.—(*a*) Methods of study and the determination of minerals, including Crystallography and Blowpipe Analysis (first semester); (*b*) Study of common and important minerals, with lectures on the origin and occurrence of minerals and the uses of minerals (second semester). Open to students who have taken or are taking qualitative analysis. (*a*) T. Th. 8:15-10:15 and W. 1:30-4:30; (*b*) Lec. Th. F. 11:15, Lab. Th. F. 1:30-4:30 3 units, both semesters (ROGERS, TURNER)

6. Petrography. (*a*) Crystal optics and study of rock forming minerals in thin sections and hand specimens (first semester); (*b*) Study of principal rock types, igneous, sedimentary, and metamorphic (second semester). Open to students who have completed course 5 or equivalent. (First semester) Lec. T. Th. 11:15, Lab. M. T. 1:30-4:30; (second semester) Lec. M. W. 11:15, Lab. T. W. 1:30-4:30 3 units, both semesters (ROGERS)

7. Paleontology.—(*a*) Systematic Paleontology, or the history and character of organisms (first semester); (*b*) Historical Geology, or the history and character of geologic formations (second semester).

* Geology and Mining 3 and 4 (Topographic and Field Geology) must be taken during the summer vacation.

Open to students who have completed course 1. Lec. M. W. F. 11:15; Lab. 8-4:30 by arrangement

2 to 4 units, 1st semester; 4 units, 2d semester (SMITH)

8. Paleontology.—Original investigation of various problems in paleontology, especially of invertebrate morphology, and of the distribution of faunas. This course will consist entirely of private work, in field and laboratory. Open to advanced students and graduates. 8-4:30 by arrangement 2 to 5 units, both semesters (SMITH)

[**9. Assaying.**—Open to students who have completed course *d* in Chemistry and courses 1 and 2 in Geology. This course is the same as course *n* in the Department of Chemistry.]

3 afternoons, either semester (LENOX)

10. Mining.—*a, b.* Mining operations and methods, including prospecting, development, methods of working, timbering, shaft sinking, and hoisting. Lectures and laboratory. T. W. Th. F. 10:15

4 units, 1st semester; 3 units, 2d semester

(NEWSOM, MCCLELLAND, STEEL)

10c. Design of Mine Plant, with thesis. W. Th. F. 1:30-4:30

3 units, 2d semester (MCCLELLAND, STEEL)

For students entering in 1907 and thereafter the following courses in mining will be given:

10. Mining:

10*a. General Lectures on Explosives.*—Blasting, methods of earth and rock excavation, prospecting by means of boring, tunneling, shaft sinking, and mining methods.

3 units, 1st semester; 2 units, 2d semester

10*b. Lectures on Mine Plant.*—Including hoisting machinery, compressors, mine pumps, ventilating fans, and the handling of ore underground and on the surface.

3 units, 1st semester; 2 units, 2d semester

10*c. Design of Mine Plant.*—To be taken in connection with course 10*f* (Mine thesis). Each students designs in detail portions of a mining plant to meet certain fixed requirements as to topography, tonnage, etc.

2 units, 1st semester; 1 unit, 2d semester

10*d. Ore Dressing.*—Lectures on crushing and concentrating machinery and methods. Comparison of milling practice in different parts of the United States. Ten afternoons in laboratory.

3 units, 1st semester

10*e. Mine Engineering.*—Lectures on general problems in connection

with administration and organization. Also includes the subjects of mine examination, mine wages, records, etc.

2 units, 2d semester

10*f*. *Mine Thesis.*—Each student describes and estimates the cost of the development and equipment of a mining property under conditions which are assigned so as to fit the experience he has gained in his summer work.

10*g*. *Summer Mining.*—Two months' systematic work in the mines. Between fourth and fifth years. 4 units

11. Metallurgy:

11*a*. *General Metallurgy.*—Four lectures a week throughout the semester. Required of all Geology and Mining majors; open to others who have completed Chemistry 2. T. W. Th. F. 10:15

4 units, 2d semester (LYON, BAHNEY)

11*b*. *General Metallurgy Laboratory.*—Open only to those who have completed course 9 and who are taking or have had course 11*a*. Th. F. 1:30-4:30 2 units, 2d semester (LYON, BAHNEY)

11*c*. *Metallurgy of Constructive Materials.*—A study of the manufacture and physical properties of iron, steel, and other alloys, with reference to their selection as constructive materials. Two lectures a week, and an occasional afternoon of laboratory work. Students taking this course are expected to have a knowledge of Elementary Chemistry. Lec. W. F. 11:15; Lab. by arrangement

2 units, 1st semester (LYON, KELLOGG)

11*d*. *Metallography and Physics of the Metals.*—Recitations, reading, and laboratory work. Howe's "Iron, Steel, and Other Alloys" will be used as a text. The laboratory work will include a study of the microstructure of the industrial metals and alloys, and of the influence of chemical composition, thermal and mechanical treatment, upon their structure. Also the relation of the structure of metals and alloys to their physical properties. Open only to students who have completed Chemistry 2, *d*, and *j*. 3 to 5 units, either semester (LYON)

11*e*. *Metallurgical Laboratory.*—Considerable option will be allowed in the work of this course. A student may either take up some problem or problems in connection with the extraction of metals from their ores, such as the facilities of the laboratory will permit, or he may take up advanced work in the physics of metals, metallography, etc. Students wishing to take up work in connection with the extraction of metals from their ores must have completed Chemistry *d* and *e*, or their equivalent. Those wishing to take up advanced work in the physics of

the metals, metallography, etc., must have completed Chemistry *d* and *j*, or their equivalent. 1:30-4:30 by arrangement

3 to 5 units, either semester (BAHNEY)

11*f*. *Chemistry of Fuels Used in Metallurgy.*—A course of study of coal, coke, and petroleum. Open to those who have completed Chemistry *b*. 8:15-12:15 by arrangement

1 to 3 units, 1st semester (BAHNEY)

12. Advanced Mineralogy.—Properly qualified students may take up one or more of the following lines of study: (1) crystal morphology, (2) crystal optics, (3) chemical mineralogy and mineral analysis, (4) chemical photography and rock analysis, (5) paragenesis of minerals (introduction to study of ore-deposits). These courses serve as a direct preparation for original work. By arrangement

1 to 5 units, either semester (ROGERS)

13. Paleontology.—Lectures on special topics. Open to advanced students and graduates. Lec. T. Th. 11:15; Lab. by arrangement

2 units, both semesters (SMITH)

14. Special Courses.—Special courses of instruction and training are laid out for advanced and special students according to the needs and qualifications of each individual. Special investigations are taken up by advanced students as rapidly as it is possible for them to undertake such work advantageously.

1 to 5 units, both semesters (BRANNER, NEWSOM)

[For courses in the designing of mining machinery and mine structures, and in mineral analysis, see Departments of Mechanical Engineering and Chemistry.]

Laboratory and Syllabus Fees.—Courses 2, 10*b*, $2.50 each; course 3, $10; course 4, $15; course 5, $3 each semester; courses 10*a*, 10*b*, 11*a*, 11*c*, $5 each; course 11*b*, $20; courses 11*d*, 11*e*, $5 per unit of laboratory credit.

ENGINEERING

A. ENTRANCE SUBJECTS

Students intending to take their major in one of the Engineering Departments are advised, though not required, to present, among their entrance subjects, advanced algebra,* solid geometry, trigonometry,*

* Courses B and 1*a* in Applied Mathematics are required of all first-year students in Engineering, except such as have credit in the corresponding entrance subjects and also pass special examinations (see announcement of the Department of Applied Mathematics, p. 133).

physics, drawing, and German or French. Special students should have completed entrance English, elementary algebra, and plane geometry.

In and after August, 1909, students must present among their entrance subjects solid geometry and trigonometry, in order to take the first year's work in applied mathematics for engineers. Those who fail to do this will not be able to graduate in less than five years.

B. General Courses

I. Applied Mathematics

First-Year Courses:—Algebra; Trigonometry; Co-ordinate Geometry.

Second-Year Courses:—Calculus; Theoretical Mechanics.

(See announcement of Department of Applied Mathematics, p. 133.)

II. General Technical Courses

1a. Linear Drawing and Lettering.—(Drafting two afternoons a week, September and October.) Open to all students, and required of students in Engineering. The instruments and materials for this course cost from twenty to thirty dollars. 1:30-4:30, (I) M. T., (II) Th. F., (III) W. (and S. 9-12). 1 unit, either semester (Foss)

1b. Descriptive Geometry.—Including applications to shades, shadows, and perspective. (Two afternoons of drafting each week, November and December. Two lectures and two afternoons of drafting each week, January to May.) This course is open to students who have completed or who are taking Solid Geometry and Engineering 1*a*, and is required of students in Engineering. Lec. T. Th. 10:15; Dft. (I) M. T., (II) Th. F. 1:30-4:30

1 unit, 1st semester; 4 units, 2d semester (Foss)

2. Applied Mechanics:

a. Mechanics of Materials.—Under this head are treated the theory of the strength and elastic properties of the ordinary materials of engineering construction. The main subjects covered are simple tension, compression, and shear; theory of flexure, with applications to simple and continuous beams; theory of long columns; torsion; repeated stress; sudden stress and resilience. (Lectures and recitations three hours a week.)

b. Testing of Materials.—Each student is required to make a series of experiments, testing the strength and elastic properties of wrought

iron, cast iron, steel, and wood. A careful record of all experiments is required of every student. (Laboratory work, six hours a week.)

Open to students who have completed the first- and second-year courses for Engineering students in Applied Mathematics; required of all students having Engineering as a major subject. Rec. M. W. F. 9:15; Lab. (I) M. W. F. 10:15-12:15, (II) Th. F. (III) M. T. 1:30-4:30

5 units, 1st semester (Wing, Fowler)

3. Hydraulics:

a. Hydrostatics and Hydraulics.—This course treats of fluid pressure, the principles of fluid equilibrium, and the laws governing the flow of water through orifices, over weirs, in closed conduits, and in open channels. Open to students who have completed courses 2 and 3 in Applied Mathematics. M. W. F. 9:15.

3 units, 2d semester (Hoskins)

b. Hydraulic Motors.—A discussion of the theory of the main types of turbines, including centrifugal pumps. A few lectures on the general theory of energy and on relative motion are given as an introduction to the course. Open to students who have completed course 3*a*. M. W. F. 9:15.

3 units, 1st semester (Hoskins)

I. CIVIL ENGINEERING

Charles David Marx, Charles Benjamin Wing, Leander Miller Hoskins, John Charles Lounsbury Fish, Professors.
Frederick Hall Fowler, John Harrison Foss, Instructors.

A. Topographic Engineering

4a. Elementary Surveying.—Instruments; systems of co-ordinates; methods of surveying; latitude and azimuth; errors of observation; surveys; computing and mapping. (Lectures two hours, drafting and field work nine hours, each week.) Open to students who have completed Engineering 1*a* and Applied Mathematics 1. Required of students in Civil and Mining Engineering. Lec. T. Th. 9:15 (first semester), M. W. 8:15 (second semester); Field S. 9-4:30

5 units, either semester (Foss)

4b. Elementary Surveying.—Course 4*a* abridged for students in Mechanical and Electrical Engineering. (Field work, reading, and drafting, six hours each week.) S. 9-4:30.

2 units, 1st semester (Fowler)

B. Railroad Engineering

6a. Railroad Surveying.—Including the transition curve and earthwork. (Recitations two hours, drafting and field work nine hours each week.) Open to students who have completed 4*a*. Required of students in Civil Engineering. Lec. T. Th. 9:15; Field S. 9-4:30
5 units, 2d semester (FISH)

6b. Railroad Location.—Economics of location. Open to students who have completed 6*a*. 2 units, 1st semester (FISH)

6c. Railroad Construction.—(Drafting-room, two afternoons a week.) Open to students who have completed 6*a*, and who have taken or are taking 8*b*. 2 units, 2d semester (FISH)

C. Structural Engineering

8a. Elements of Design.

1. *Materials.*—[See course 11*c*, Geology and Mining.]

2. *Mechanics of Structures.*—Course 3 in Applied Mathematics is extended to the analytical and graphical determination of stresses in simple trusses. (Drafting-room, nine hours a week first half of semester.)

3. *Theory of Structural Details.*—Course 2 is extended to an investigation of the distribution of stresses in structural details. (Drafting nine hours a week, last half of semester.)

Open to students who have completed course 1 in Engineering, and who have taken or are taking course 2 in Engineering, and also course 11*c* in Geology and Mining. Required of all students having Civil Engineering as a major subject. Lec. M. W. F. 10:15; Dft. W. Th. F. 1:30-4:30. 3 units, 1st semester (WING)

8b. Elements of Design.

1. *Materials.*—Structural materials, other than metals, are studied from an engineering standpoint. Wood, stone, brick, limes, cement, etc., are considered in order. (Lectures three hours a week first half of semester.)

2. *Foundations.*—Under this head are considered the bearing power of soils, strength of piles, distribution of pressures, and similar details connected with the design of simple foundations. (Lectures three hours a week last half of semester.)

3. *Design.*—Complete designs are made, including working drawings, bill of materials, and estimate of cost, of some simple structure, such as a mill building or highway structure. (Drafting-room, nine hours a week first half of semester; six hours a week last half of semester.)

4. *Testing.*—Extending the work of course 2*b*. Each student is required to make a series of experiments, testing the physical properties of cement. (Laboratory, three hours a week last half of semester.)

Open to students who have completed course 8*a* in Civil Engineering; required of all students having Civil Engineering as a major subject. Lec. M. W. F. 10:15; Dft. W. Th. F. 1:30-4:30

5 units, 2d semester (WING)

8c. Elements of Design.—Courses 8*a* and 8*b* abridged to meet the requirements of students having Mining, Mechanical, or Electrical Engineering as a major subject. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings. (Hours to be arranged by consultation.)

Open to students who have completed courses 1 and 2 in Engineering, and course 11*c* in Geology and Mining. W. Th. F. 1:30-4:30

3 units, 2d semester (WING)

9. Railway Bridges.—This course comprises the determination of the stresses in modern types of railroad bridges, including cantilever and swing spans, masonry arches, and arch ribs; the discussion of the most economical types, spans, and dimensions of bridges and bridge members; the study of the methods of constructing sub-aqueous foundations, shop methods, erection, inspection of material, specifications, and other factors influencing the design of bridges. Designs are made by each student to fulfill actual conditions, the parts proportioned, and bills of material prepared. Open to students who have completed course 8. (Lectures two hours per week, drafting nine hours.) W. Th. F. 1:30-4:30. 5 units, both semesters (WING)

D. Hydraulic Engineering

12. Water-Supply Engineering for Towns and Districts.—Sources of supply. Collecting and storing of water, either for water supply of towns or for irrigation purposes. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a* and 8*a* in Civil Engineering; required of all students who take their major in Hydraulic Engineering. Lec. M. W. F. 9:15; Dft. M. T. 1:30-4:30 5 units, 1st semester (MARX)

13. Sanitary Engineering.—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitary problems, such as removal of sewage, destruction of garbage, construction, maintenance, sweeping, and repairs of streets and

pavements. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a*, 8*a*, and 12 in Civil Engineering; required of all students who take their major in Hydraulic Engineering. Lec. M. W. F. 9:15; Dft. M. T. 1:30-4:30. 5 units, 2d semester (Marx)

15. Construction of Canals, River and Harbor Improvements.—Lectures and designing as per arrangement. Open to students who have completed courses 2*a*, 2*b*, and 3 in Engineering, and 4*a* and 8*a* in Civil Engineering. 2 units, both semesters (Marx)

16. Technical Seminary.—Study of German and French technical journals. Open only to fourth-year students in Civil Engineering. 2 units, both semesters (Marx)

II. MECHANICAL ENGINEERING

William Frederick Durand, Professor.

Guido Hugo Marx, Associate Professor.

William Rankine Eckart, Everett Parker Lesley, Assistant Professors.

Lawrence Edminster Cutter, Charles Norman Cross, Edward John Stanley, James Bennett Liggett, Theodore Palmateer, Robert Henry Harcourt, Instructors.

The courses specified below represent the major work for the undergraduate degree with Mechanical Engineering as a major subject. In addition, the typical work for this major includes the following courses in other departments:

Applied Mathematics 1, 2, 3; Engineering 1*a*, 1*b*, 2, 3*a*, 3*b*; Physics 7 and 6, or 7 and 3; Chemistry 1 and *a*; Metallurgy 11*c*; Electrical Engineering 1.

Students entering with advanced credit may also elect such other work as time and preparation permit.

1. Shop Work:

a. Woodworking.—(Two exercises a week, half year.)

b. Pattern-Making.—(Three exercises a week, half year.)

c. Forge Work.—(Three exercises a week, half year.)

d. Foundry Work.—(Three exercises a week, half year.)

e. Machine Shop Work.—(Three exercises a week, through the year.)

Open to all students, and required of students in Mechanical Engineering. Daily 8:15-4:30, by arrangement

2 or 3 units, each semester

(Stanley, Liggett, Palmateer, Harcourt)

2. Elementary Machine Drawing.—Practice in making freehand sketches of machine parts from which working drawings, tracings, and blueprints are developed. (Six hours a week in drafting-room.) Prerequisite: course 1*a* in Engineering. (I) T. Th. 9:15-12:15, (II) M. T. 1:30-4:30 2 or 3 units, either semester (Cutter)

3. Elementary Machine Design:

a. Function of machines; motion, force, and work in machines; valve gears. (Three hours a week, lectures, and recitations, second semester.)

b. Drafting course applying the principles treated in *a*. (Six hours a week drafting, second semester.)

Prerequisites: course 2 in Mechanical Engineering and course 1*b* in Engineering. Courses *a* and *b* must be taken together and are required of students in Mechanical Engineering. Lec. M. W. F. 8:15; Dft. M. or T. or F. 1:30-4:30 5 units, 2d semester (G. H. Marx)

4. Machine Design.—Study of machine details, such as fastenings (including bolts and screws, riveted joints and boiler design, fits and fitting); axles, shafts, and spindles; journals, boxes, and lubrication; ball and roller bearings; sliding surfaces; couplings and clutches; gear belt, rope, and chain transmission systems; flywheels; springs; frames, and supports. (Two hours a week recitations and lectures, six hours in the drafting-room, throughout the year.) Open to students who have completed course 3 in Mechanical Engineering, and who are taking course 2 in Engineering; required of students in Mechanical Engineering. Lec. T. Th. 8:15; Dft. M. T. (first semester), W. Th. (second semester), 1:30-4:30 4 units, both semesters (G. H. Marx)

4a. Machine Design.—An abridged treatment of the field covered in courses 3 and 4. (Three hours a week recitations and lectures, six hours a week in the drafting-room, first semester.) Open to students who have completed Engineering 1*b*, Mechanical Engineering 2, and are taking Engineering 2. Intended for Engineering students whose major subject is not Mechanical Engineering. Lec. M. W. F. 8:15; Dft. Th. F. 1:30-4:30 5 units, 1st semester (G. H. Marx)

5. Advanced Machine Design.—Design of complete machines. Students may elect machine tools, cranes, steam or gas engines, or special problems. (One lecture and six hours drafting per week.) In-

tended for fourth-year students who have completed courses 4 and 6. Lec. F. 10:15; Dft. 1:30-4:30, by arrangement
3 units, both semesters (G. H. Marx, Cutter)

6. Heat Engines.—Mechanical theory of heat and its applications. (Two lectures and three hours' office work per week.) Required of third-year students in Mechanical Engineering. Lec. T. Th. 9:15; Office T. Th. 10:15-12:15 3 units, both semesters (Durand)

7. Thermodynamics.—A course in theoretical thermodynamics, with special reference to heat engines, and intended to supplement course 6, which is a prerequisite. Required of fourth-year students in Mechanical Engineering. M. 9:15 1 unit, 2d semester (Durand)

8. Experimental Engineering:

a. Calibration and Use of Engineering Apparatus and Instruments, including gages, thermometers, planimeters, indicators, dynamometers, meters, steam calorimeters, fuel calorimeters, and the testing of lubricating oils. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 6. Required of third-year students in Mechanical Engineering. Lec. F. 11:15; Lab. 1:30-4:30, by arrangement 3 units, 2d semester (Eckart, Cross)

b. Testing of Steam Engines and Boilers, including determination of engine clearance; valve setting; mechanical efficiency, economy and complete tests of simple and compound engines, steam turbines, gas engines; tests for speed regulation, and the testing of boilers. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 8*a*. Required of fourth-year students in Mechanical Engineering. Lec. F. 10:15; Lab. 1:30-4:30, by arrangement
3 units, 1st semester (Eckart, Cross)

c. Testing of Pumping Machinery and Power Plant Auxiliaries, including steam and centrifugal pumps, hot-air pumping engines, injectors, heaters and economisers, blowers, condensers, refrigerating machinery, and a complete power-plant test. (One lecture and six hours laboratory per week.) Open to students who have completed courses 8*a* and 8*b*. Required of fourth-year students in Mechanical Engineering. Lec. Th. 10:15; Lab. 1:30-4:30, by arrangement
3 units, 2d semester (Eckart, Cross)

d. An Abridged Course in Experimental Engineering, intended for Civil Engineering, Geology and Mining, and Chemical Engineering students. Includes the calibration of apparatus, testing of steam and gas engines, steam turbines, boilers, pumps, and water wheels. (One lec-

ture and six hours in the laboratory per week.) Open to students who have completed course 6. Lec. F. 10:15; Lab. 1:30-4:30, by arrangement 3 units, 1st semester (ECKART, CROSS)

e. An Advanced Course in the Investigation of Engineering Problems. Open to all students who have completed courses 8*a*, *b*, and *c*. 1:30-4:30, by arrangement

1 to 5 units, both semesters (ECKART, CROSS)

9. Pumping Machinery.—A lecture course for fourth-year students. Prerequisite: course 6, first semester. M. W. 10:15

2 units, 2d semester (DURAND)

10. The Mechanical Engineering of Central Power Stations.—Lectures. Prerequisite: course 6. M. W. 10:15

2 units, 1st semester (DURAND)

11. Seminary.—A weekly conference for the discussion of current engineering literature and of special topics. Open to fourth-year students only. W. 11:15 1 unit, both semesters (DURAND)

Shop and Laboratory Fees.—Courses 1*a*, 1*b*, 1*c*, 1*d*, four dollars each; course 1*e*, five dollars per semester; course 8, six dollars per semester.

III. ELECTRICAL ENGINEERING

HARRIS JOSEPH RYAN, Professor.
SAMUEL BARCLAY CHARTERS, JR., Assistant Professor.
WILLIAM ARTHUR HILLEBRAND, Instructor.

The courses specified below represent the major work for the undergraduate degree with Electrical Engineering as major subject. In addition, the typical work for this major includes the following courses in other departments:

Applied Mathematics, A, B, 1, 2, 3; Engineering, 1*a*, 1*b*, 2, 3*a*, 3*b*; Mechanical Engineering 1, 2, 3, 6, 8, 10; Physics 6*a*, 6*b*, and 9; Chemistry 1 and *a*.

Students entering with advanced credit may also elect such other work as time and preparation permit.

1. Elements of Electrical Engineering.—An abridged course in the industrial applications of electricity, intended for non-electrical engineering students. Two laboratory lectures, one recitation, and one three-hour computing period per week. Prerequisites: courses 1, 2, and 3, in Applied Mathematics and course 6*b* in Physics. Lec. (Min.) M.

W., (Civ., Mech.) T. Th. 11:15; Rec. F. 11:15; Comp. (Min.) F. 1:30-4:30, (Civ., Mech.) Th. 1:30-4:30
4 units, 1st semester (CHARTERS, HILLEBRAND)

2. Electrical Energy.—Required of third-year students in Electrical Engineering. Class and laboratory instruction in the technology of magnetic, electric, and electrostatic phenomena, electrical machinery and auxiliaries in continuous and alternating current working.

a. Recitations and Experimental Demonstrations. (First semester) Lab. Lec. M. 8:15; (second semester) Rec. M. W. F. 8:15, Prob. M. 9:15
1 unit, 1st semester; 4 units, 2d semester. (HILLEBRAND)

b. Laboratory Work. 1:30-4:30 by arrangement
4 units, 2d semester (CHARTERS, HILLEBRAND)

[Course 2 is supplemented by Physics 9, laboratory work in electrical measurements (4 units, 1st semester).]

3. Electrical Engineering.—Required of fourth-year students in Electrical Engineering. Lectures, laboratory work, and design problems.

a. Lectures upon: (1) Structural elements and characteristics of standard electrical machinery and auxiliaries; (2) Standardization authorized by A. I. E. E.; (3) Systems of generation, control, distribution, and use of electrical energy; (4) Economy in transmission, Kelvin's law; (5) Power plants; (6) Fire hazard, National Electrical Code; (7) Municipal distribution of electricity for lighting, railways, power, and miscellaneous service; (8) Long distance transmission of power for general purposes for railways; (9) Discussion of typical installations; (10) Elements of finance controlling the uses of electricity; (11) Survey of the electrical industries; (12) Historical and biographical sketches.
By arrangement 3 units, both semesters (RYAN)

b. Laboratory Work.—Characteristic performance of standard machinery and auxiliary apparatus; engineering tests of magnetic materials, conductors, and insulations; illumination tests of arc and incandescent lamps; tests of machinery and auxiliaries for capacity, acceptance, and technical data. 1:30 4:30 by arrangement
4 units, 1st semester (CHARTERS)

c. Design.—Predetermination of the characteristic behaviour of standard machinery from given forms and dimensions; comparison of results with those obtained by actual test in the laboratory. Elementary designs of power plants and systems of distribution; study of corresponding practice as reported in the literature and by visits to neighboring plants.
By arrangement 4 units, 2d semester (RYAN)

4. Transmission of Intelligence.—Lectures on telephony, land, submarine, and wireless telegraph. Open to fourth-year students in Electrical Engineering, and to others by permission. By arrangement 2 units, 1st semester (CHARTERS)

5. Electric Railways.—*a. Electric Railway Equipment. b. Principles of Electric Railway Practice.* Open to fourth-year students in Engineering. By arrangement 2 units, 2d semester (CHARTERS)

The Stanford Branch of the American Institute of Electrical Engineers is an organization authorized by the Institute and maintained by the members of the senior class for the discussion of the Transactions of the Institute, and of other topics as assigned, and the review of current electrical literature.

Laboratory Fees.—Two dollars per unit of university credit.

THE UNIVERSITY LIBRARY

GEORGE THOMAS CLARK, Librarian.
MELVIN GILBERT DODGE, Associate Librarian.
JOHN EDWARD GOODWIN, Supervisor Stacks and Loans.
HELEN BINNINGER SUTLIFF, Acting Head Cataloguer.
ALICE NEWMAN HAYS, Classifier.
HELEN LATHROP, Reference Librarian.
EDITH MARGARET COULTER, Supervisor Serial Department.

The Library is housed in the Thomas Welton Stanford Library Building, which forms the central portion of the easterly half of the outer quadrangle façade. On the main floor are the general reading rooms, with accommodations for 220 readers, the reference room, serial room, and catalogue room. On the second floor are six seminary rooms, used respectively by the Departments of Economics, English Literature, Germanic Languages, Greek, Latin, and History.

During term time the Library is open on week days from 8 A. M. to 10 P. M and on Saturdays and during the shorter vacations from 8 A. M. to 3:30 P. M. Special hours are arranged for the summer vacation. The shelves are open to members of the faculty and to students engaged in advanced work, upon the recommendations of their instructors. Books, other than works of reference, not required for class use, are lent for a period of three weeks.

Including the Law Department collection the Library contains upwards of 107,000 volumes and the number is rapidly increasing. Note-

worthy special collections are the Timothy Hopkins Railway Library, the Thomas Welton Stanford Australasian Library, the Hildebrand Library, consisting largely of works on Germanic philology and literature, collected by the late Professor Hildebrand of Leipzig, and the David Starr Jordan Library of Zoology, consisting of several thousand volumes and pamphlets on fishes. Students may also have access to the private library of Dr. Branner, a large collection of geological works.

THE MARINE BIOLOGICAL LABORATORY

Professors Charles Henry Gilbert and Oliver Peebles Jenkins, Directors.

Associate Professor George Clinton Price, Assistant Professors John Otterbein Snyder and Clara S. Stoltenberg, and Acting Instructor Harry Baker Humphrey, Instructors.

The Laboratory buildings are located at Pacific Grove, two miles west of Monterey, and stand on a low bluff immediately facing the sea. They consist of two two-story structures capable of accommodating about eighty students, and contain four general laboratories, one lecture-room, seventeen private rooms for special investigators, and a dark-room for photography. They are provided with aquaria, running water, and all necessary facilities for biological study. The library and apparatus of the University are available for use in the Laboratory.

Session of 1908

The Seventeenth Session will begin Monday, June 1st, and will extend over a period of six weeks, closing Saturday, July 11th. The laboratory will be under the general supervision of Associate Professor Price.

Courses of Instruction

1. General Zoology.—An elementary course open to all students, and to teachers and others who desire an acquaintance with the anatomy and life-history of marine animals and with the methods pursued in laboratory study. (Price)

2. Botany.—Open to all students. Special attention will be given to a study of the morphology and distribution of marine and fresh-water Algæ, and to the methods of collecting and preserving specimens. Arrangements will be made also for those desiring work on other forms, such as Fungi, Bryophyta, Ferns, and Spermaphyta. (Humphrey)

3. Zoology.—Open to students who have had course 1 in Zoology or Physiology, or an equivalent. The object of this course is primarily to enable students to gain a wide general knowledge of marine forms, and to this end special attention will be devoted to collecting both along the shore at low tide and at the surface of the ocean. (PRICE)

4. Structure of the Nervous System and Sense Organs of Marine Vertebrates.—Open to all students who have had course 1 in Physiology or Zoology, or an equivalent. It will consist of two lectures per week and daily laboratory work. (STOLTENBERG)

5. Vertebrate Zoology.—Open to all. A general course in the classification of vertebrates, with studies in the habits and geographical distribution of species. Special attention will be given to the birds, mammals, reptiles, and tide-pool fishes which are found in the region. (SNYDER)

Students successfully completing any of the above courses will receive five units of university credit. Only one course can be taken during the session.

Laboratory Fee.—The laboratory fee is twenty-five dollars.

MEDICINE

Arrangements are virtually completed by which the property of Cooper Medical College, founded by Dr. Levi Cooper Lane, will be turned over to Stanford University to serve as the clinical branch of the Department of Medicine of Stanford University.

The property thus transferred includes the Medical College Building, the landed and other endowment, the Lane Medical Library, Lane Hospital, Lane Hall, and other properties and endowments.

The present classes at Cooper Medical College will continue their work and receive their degrees from Cooper Medical College.

It is anticipated that the University will require for admission to its Department of Medicine three years of premedical work, or the present first three years required of students having Physiology as a major subject. The first part of the course in Medicine will be given at the University. The concluding years will be given at the present buildings of Cooper Medical College in San Francisco, these being devoted chiefly to clinical studies. Formal medical instruction is expected to begin at the University not later than 1910.

PART IV

DIRECTORY

OF

OFFICERS AND STUDENTS

ADMINISTRATIVE OFFICERS

BOARD OF TRUSTEES

Horace Davis, A. M., President,	1800 Broadway, San Francisco
Timothy Hopkins, Vice-President,	Menlo Park
George Edward Crothers, A. M., Secretary and Assistant Treasurer,	510-12 Union Trust Building, San Francisco
Charles Gardner Lathrop, Treasurer and Business Manager,	Stanford University
Samuel Franklin Leib, A. B.,	Farmers Union Building, San Jose
Thomas Bard McFarland, A. B.,	3397 Clay St., San Francisco
George Edward Gray,	U. S. Naval Hospital, Mare Island
Joseph Donohoe Grant, A. B.,	2200 Broadway, San Francisco
Leon Sloss,	1516 Van Ness Ave., San Francisco
Thomas Welton Stanford,	142 Russell St., Melbourne, Australia
Frank Miller,	"Holly Oaks," Sausalito
Whitelaw Reid, A. M., LL. D.,	Dorchester House, London, England
William Babcock,	San Rafael
Charles P. Eells,	2415 Pierce St., San Francisco
Vanderlyn Stow,	Cor. Baker and Broadway, San Francisco

STANDING COMMITTEES OF THE TRUSTEES

Finance: Sloss, Lathrop, Leib, Babcock, Crothers, Miller, Stow.

University: Eells, Leib, Grant, McFarland, Hopkins, Sloss, Crothers.

Library: McFarland, Hopkins, Eells, Stanford, Stow, Reid, Gray.

Rules: Grant, Crothers, McFarland, Miller, Leib, Stow, Babcock.

Museum: Miller, Babcock, Hopkins, Lathrop, Gray, Stanford, Grant.

Memorial Church: Lathrop, Reid, Gray, Eells, Stow.

THE UNIVERSITY

[Office and office hours in parentheses]

President: David Starr Jordan. (112, 2-4.)
Vice-President: John Casper Branner.
Registrar: Orrin Leslie Elliott. (116, 8:15-12:15, 1:30-4:30, Saturday 9-12:15.)
Librarian: George Thomas Clark. (Library, 8:30-4:30.)
Secretary to the President: George Archibald Clark. (113, 9-12, 2-5.)

THE DEPARTMENTS

[(1) Executive Head; (2) Secretary of Department Faculty; * Acting]

Greek: Augustus Taber Murray; Edward William Hope.
Latin: Henry Rushton Fairclough; Benjamin Oliver Foster.
Germanic Languages: George Hempl; William Alpha Cooper.
Romanic Languages: John Ernst Matzke; Clifford Gilmore Allen.
English Literature and Rhetoric: Alphonso Gerald Newcomer; Samuel Swayze Seward, Jr.
English Philology: Ewald Flügel.
Philosophy: Frank Angell.*
Psychology: Frank Angell.
Education: Ellwood P. Cubberley; Percy Erwin Davidson.
History: Max Farrand; Henry Lewin Cannon.
Economics and Social Science: Allyn Abbott Young*; Harry Alvin Millis.
Law: Charles Henry Huberich*; Charles Andrews Huston.
Drawing: Arthur Bridgman Clark.*
Mathematics: Robert Edgar Allardice; Hans Frederik Blichfeldt.
Applied Mathematics: Leander Miller Hoskins.
Physics: Fernando Sanford; Joseph Grant Brown.
Chemistry: John Maxson Stillman; Robert Eckles Swain.
Botany: Douglas Houghton Campbell; George James Peirce.
Systematic Botany: William Russell Dudley; LeRoy Abrams.
Physiology and Histology: Oliver Peebles Jenkins.
Hygiene: William Freeman Snow.*
Zoology: Charles Henry Gilbert; John Otterbein Snyder.
Entomology and Bionomics: Vernon Lyman Kellogg.
Geology and Mining: John Flesher Newsom*; Dorsey Alfred Lyon.

Civil Engineering: Charles David Marx; Charles Benjamin Wing.
Mechanical Engineering: William Frederick Durand; William Rankine Eckart.
Electrical Engineering: Harris Joseph Ryan; Samuel Barclay Charters, Jr.

STANDING COMMITTEES OF THE ACADEMIC COUNCIL

Advisory Board

Durand, Farrand, Gilbert, Hoskins, Kellogg, C. D. Marx, Murray (Secretary), Sanford, Stillman (Chairman).

1. **Student Affairs:** Clark, Price, Whitaker, Cathcart, Swain.
2. **Athletics:** Angell, Durand, Wing, Snow, Whitaker.
3. **Public Exercises:** Duniway, Farrand, Newcomer, Woodward.
4. **Literary Contests:** Alden, Duniway, Elmore, Cathcart, Seward.
5. **Public Health:** Snow, Griffin, Swain, Stoltenberg, Peirce.
6. **Delinquent Scholarship:** Gilbert, Elliott, Murray, Hoskins, Woodward, Millis.
7. **Public Entertainments:** S. W. Young, A. A. Young, C. D. Marx, Peirce, G. H. Marx.

Academic Committees

1. **Executive Committee:** Jordan, Elliott, Clark, Cubberley, Fairclough, Farrand, Franklin, Gilbert, Green, G. H. Marx, Newcomer, Peirce.
2. **Admission and Advanced Standing:** Elliott, Matzke, Ryan, Cubberly, Swain.
3. **Registration:** Elliott, Snow, Cooper, Seward, Manning.
4. **Graduation:** Elliott, Jenkins, Anderson, Johnston, Newsom.
5. **Schedule and Examinations:** Elliott, Huberich, McFarland, Blichfeldt, E. W. Martin.
6. **Graduate Study:** Murray, Campbell, Angell, Hempl, Franklin.
7. **Library:** Stillman, C. D. Marx, Kellogg, Fairclough, Adams.
8. **University Publications:** Fairclough, Smith, G. H. Marx, Heath, Millis.
9. **Recommendation of Teachers:** Elliott, Cubberley, Sanford, Hall, Cooper.

FACULTY AND OTHER OFFICERS

[Name; title; office; office hour; residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('P' indicates *Palo Alto* post-office; 'Mayfield, M,' *Mayfield* post-office; etc.). Street address *Palo Alto* or *Campus* unless otherwise named. Members of the Academic Council are indicated by SMALL CAPS.

'Daily' does not include Saturday. Office hours are daily unless otherwise noted. Brackets indicate 'absent on leave'; the dagger (†) marks the names of men who are married.]

The superior number [1] indicates first semester, [2] indicates second semester.

ABRAMS, L. R., Asst. Prof. Botany, (465) 9 Alvarado Row
[†ADAMS, E. D., Prof. Hist., In Europe]
[†ALDEN, R. M., Asst. Prof. Engl. Lit., In Europe]
ALLARDICE, R. E., Prof. Math., (15, 10:15) 19 Salvatierra St.
Allen, C. G., Asst. Prof. Rom. Lang.,
(245, M. W. F. 11:15) 321 Melville Ave.
†ANDERSON, M. B., Prof. Engl. Lit., (203, F. 11:15) Menlo Park
†ANGELL, F., Prof. Psychol., (399, T. Th. 2-3) 1200 Bryant St.
Atherton, (Miss) C. F., Asst. to Registrar, 19 Lasuen
Atkin, E. G., Instr. Rom. Lang.,
(245, M. W. F. 12:15, F. 9:15) 20 Lasuen St.
†Bahney, L. W., Instr. Metallurgy, (61, 8:15-4:30) 305 Alma St.
[†BASSETT, L. E., Asst. Prof. Elocution, In Europe]
Bateman, W. G., Asst. Chemistry (24c) 12 Encina
[2]Bigley, (Miss) W. H., Asst. Library, 255 Lytton
Bille, (Miss) A. M., Asst. English, 170 Waverly St., P
†Bingham, J. W., Acting Asst. Prof. Law,
(5, T. Th. 11:30, M. W. 4:30) 1037 Ramona St., P
BLICHFELDT, H. F., Assoc. Prof. Math, (15) College Terrace
†Boezinger, B., Instr. German, (32, M. W. F. 9:15) 176 Bryant St., P
Boezinger, (Mrs.) S., Asst. Rom. Lang., 176 Bryant St., P
Bolton, (Miss) F., Asst. Hygiene, (M. W. 11) 453 Melville Ave., P
[†BRANNER, J. C., Prof. Geology, In South America]
Bristol, (Miss) S. B., Asst. to Registrar, 1115 Ramona St.
†Briggs, W. D., Asst. Prof. English,
(207b, M. 9:15, T. 1:30-2) 315 Melville Ave.
†BROWN, J. G., Asst. Prof. Physics, (385) 1013 Ramona St., P
Burbank, L., Lecturer Bionomics, Santa Rosa

Burcham, W. D., Asst. President's Office, Encina Hall
[2]Burke, C. V., Asst. Zoology, 603 Lytton Ave., P
Cáceres, S. N., Asst. Rom. Lang., 361 Addison Ave., P
CAMPBELL, D. H., Prof. Botany, (468) 19 Salvatierra St.
†CANNON, H. L., Asst. Prof. Hist.,
(230, T. Th. 10:45, W. 2) 1235 Webster St., P
†CATHCART, A. M., Assoc. Prof. Law,
(3, M. W. F. 11:15) 233 Addison Ave., P
Chapman, J. F., Asst. Hygiene, 100 Encina
†Charters, S. B., Jr., Instr. Elec. Eng.,
(505, 1:30-4:30) 411 Lytton Ave., P.
Clark, (Mrs.) A. M., Asst. Library, 531 Cowper St., P
†CLARK, A. B., Assoc. Prof. Drawing,
(314, T. W. Th. 1:20) Hanover St., College Terrace
†Clark, G. A., Pres. Secretary, (113, 9-12, 2-5) 7 Alvarado Row
†CLARK, G. T., Librarian, (Lib., 8:30-4:30) Menlo Heights
[1]Clark, H. F., Asst Civil Eng., 187 Encina
[2]Cole, E. D., Asst. Civil Eng., 109 Encina
Cone, (Miss) E. H., Asst. English, Wilson St., P
[1]Coolidge, (Mrs.) H. B., Asst. to Registrar, 440 Cowper St., P
Coonradt, A. C., Asst. Civil Eng., 160 Encina
[2]Cooper, (Miss) N. A., Clerk, Hist. Dept., 527 Homer Ave., P
†COOPER, W. A., Asst. Prof. German, (35, 9:15) 1111 Emerson St., P
Coulter, (Miss) E. M. Asst. Library, 2 Salvatierra St.
[†Cox, A. J., Instr. Chem., Manila, P. I.]
Crandall, (Miss) E., Asst. Psychology, 948 Ramona St., P
[2]Crane, W. F., Asst. Physics, 58 Encina
Cross, C. N., Instr. Mech. Eng., (504, 1:30-4:30) 253 Homer Ave., P
Cross, I. B., Asst. Economics, (222, M. W. F. 9:15) 146 Encina
†CUBBERLEY, E. P., Prof. Educ., (51, 10:15, M. W. F., 11:15)
1345 Webster
Cummings, E. J., Asst. Greek, 93 Encina
Cuthbertson, A. M., Asst. Chemistry, 638 Channing Ave., P
†Cutter, L. E., Instr. Mech. Eng., 425 Waverly St., P
[2]Dailey, M. E., Lecturer in Education, San Jose
[2]Danton, (Mrs.) A. P., Asst. German, 1327 Byron St., P
†Danton, G. H., Act. Asst. Prof. German, (32, 9:15) 1327 Byron St., P
Daugherty, R. L., Asst. Applied Math., 235 Emerson St., P
Davidson, P. E., Acting Asst. Prof. Educ.,
(53, M. W. F. 10:15) 639 Gilman St., P

[2]Derby, W. F., Asst. Entomology, Encina
Dickerson, (Miss) M. C., Acting Instr. Bionomics, (433, 11:15) 11 Salvatierra
Dillon, J. R., Asst. Hygiene, 4 Salvatierra St
Dillon, (Miss) J., Asst. Rom. Lang., 11 Salvatierra St.
†Doane, R. W., Instr. Entomology, (434, 8:15-4) 527 Homer Ave., P
†Dodge, M. G., Assoc. Librarian, (Lib. 9-4) Menlo Heights
Dole, S. B., Asst. Civil Eng., 11 Lasuen St.
†Drew, E. R., Asst. Prof. Physics, (384, M. W. F., 11:15) 1321 Waverly St., P
Dudley, E. G., Asst. Botany, 222 Kingsley Ave.
Dudley, W. R., Prof. Botany, 222 Kingsley Ave.
Dunbar, E. S., Asst. Civil Eng., 12 Salvatierra St.
†Duniway, C. A., Assoc. Prof. Hist., (230 M. F., 9:30, T. 2) 5 Alvarado Row
†Durand, W. F., Prof. Mech. Eng., (260, 11:15) 2 San Juan St.
Durand, W. L., Asst. Mech. Eng., 2 San Juan St.
Earle, H. P., Instr. Rom. Lang., (245, M. W. F. 12:15) 3 Salvatierra
†Eckart, W. R., Jr., Asst. Prof. Mech. Eng., (503, 1:30-4:30) 1125 Ramona St., P
†Elliott, O. L., Registrar, (110, 8:15-12:15; 1:30-4:30, S. 9-12:15) 12 Alvarado Row
Ellis, J. F., Asst. Chemistry, 55 Encina
†Elmore, J., Asst. Prof. Latin, (22, F. 10:15) 1134 Emerson St., P
Elwell, C. F., Asst. Applied Math., Encina Hall
Evenden, E. S., Asst. Library, 718 Bryant St., P
†Ewell, E. R., Asst. Chemistry, 623 Middlefield Road, P
†Fairclough, H. R., Prof. Latin, (22, M. 2:30, T. Th. 12:15) 6 Alvarado Row
Farrand, M., Prof. Hist., (230, T. Th. 11:15, W. 2) 19 Salvatierra St.
[2]Ferguson, C., Asst. Chemistry, Encina
[2]Fergusson, J. G., Asst. Latin, 8 Salvatierra St.
Fields, (Miss) C. L., Instr. English, (211, M. W. F. 10:15, T. Th. 9:15) 4 Alvarado Row
[†Fish, J. C. L., Assoc. Prof. Civil Eng., Corsica, Pa.]
[Fisher, W. K., Instr. Zoology, Washington, D. C.]
†Flugel, E., Prof. Eng. Philology, (204, M. W. F. 12) 1130 Bryant St.
Foss, J. H., Instr. Civil Eng., (132, 1:30-4:30) 327 Emerson St., P
†Foster, B. O., Asst. Prof. Latin, (22, T. 10:15) 3 Salvatierra St.

Fowler, F. H., Instr. Civil Eng.,
(138, M. W. F. 10-12) 221 Kingsley Ave., P
†Franklin, E. C., Prof. Chemistry, (35c) 1116 Ramona St.
[2]French, (Miss) D. C., Asst. English, 17 Lasuen St.
†Gardner, D. C., Chaplain,
(Vestry, T. W. Th. F. 9-12) 1a Alvarado Row
Gardner, W. H., Asst. Chemistry, 34 Encina
Geer, C. L., Asst. English, College Terrace
†Gilbert, C. H., Prof. Zoology, (443, 2:30) 433 Melville Ave.
†Goodwin, J. E., Supervisor Stacks and Loans, 11 Alvarado Row
†Gray, H. D., Asst. Prof. Eng.,
(207a, M. W. F. 10) 1103 Ramona, P
Gray, (Miss) M. S., Asst. Library, Santa Inez St.
[Green, (Miss) L. P., Reference Librarian, Ithaca, N. Y.]
†Green, R. L., Prof. Math. (45, 11:15) 13 Salvatierra St.
†Griffin, J. O., Prof. German, (35, T. Th. 10:15) 14 Alvarado Row
†Guérard, A. L., Asst. Prof. Rom. Lang.,
(245, T. Th. 11:15) 918 Ramona St.
Hadden, (Miss) E., Asst. Library, 1157 Ramona St., P
Hall, (Miss) A. G., Asst. Library, 465 Hamilton Ave., P
†Hall, H. J., Asst. Prof. Engl., (206, T. Th. 1:30) 209 Addison Ave., P
Harcourt, R. H., Instr. Mech. Eng.,
(Forge, 8:15-4:30) 651 Waverly St., P
†Harshe, R. B., Instr. Drawing, (314, Th. F. 1:30) 22 Lasuen
Harvey, A. E., Instr. Hist.,
(230, M. W. 11:15, T. 3:30) 559 Cowper St., P
Hays, (Miss) A. N., Classifier Library, 3 Alvarado Row
[2]Hayes, (Miss) H., Asst. Library, 445 Forest Ave., P
†Heath, H., Assoc. Prof. Zoology, (436, 11:30) 1147 Ramona St., P
†Hempl, G., Prof. Germanic Philol.,
(32, M. T. 2:30, Th. F. 4:20) 382 Lincoln Ave., P
[2]Herrmann, F. A., Asst. Civ. Eng., 4 Salvatierra St.
Hillebrand, W. A., Instr. Elec. Eng., (506, 10:15) 159 Encina Hall
†Hilmer, H., Instr. German, (35, M. 10:15) 329 University Ave., P
[1]Hoagland, D. R., Asst. Chemistry, Encina
Holman, R. M., Asst. Botany, 235 Emerson St., P
Hohfeld, W. N., Asst. Prof. Law, (4, M. W., 9:15) 334 Lincoln Ave., P.
Hope, E. W., Instr. Greek, (25) 1134 Emerson St., P
†Hoskins, L. M., Prof. Applied Math., (275) 365 Lincoln Ave., P
†Huberich, C. H., Prof. Law, (3, M. W. F. 9:15) 318 Lincoln Ave., P

Hughes, A. D., Asst. Civil Eng., 131 Encina
[Hughes, (Miss) F., Cataloguer Library, 1248 Waverly St., P]
[†Humphrey, H. B., Acting Instr. Botany, Santa Rosa]
[1]Humphrey, (Mrs.) O. A., Asst. Syst. Botany. 1103 Ramona St., P
Huston, C. A., Asst. Prof. Law (5, M. Th., 11:30) 9 Alvarado Row
Hyatt, (Miss) S., Asst. Physics, 67 Roble
†JENKINS, O. P., Prof. Physiol. and Histol., (482) 3 Lasuen St.
[1]Johnson, C. C., Asst. Civil Eng., 139 Encina
Johnson, (Miss) E. E., Asst. Hygiene, 375 Hawthorne Ave., P
†JOHNSTON, O. M., Assoc. Prof. Rom. Lang.,
(242, 10:15) 4 Alvarado Row

Jones, R. A., Asst. Chemistry, 117 Encina
†JORDAN, D. S., President, (112, 2-4) Xazmin Hs., Serra Ave.
[2]Jordan, E., Instr. App. Math., (40) 4 Alvarado Row
Kellogg, R. S., Asst. Geol. & Mining, 8 Salvatierra St.
KELLOGG, V. L., Prof. Entomol., (431, 11:15) 19 Salvatierra St.
Langstroth, L., Asst. Chemistry, 1 Lasuen St.
Lanktree, (Miss) M. H., Asst. Drawing, 12 Alvarado Row
Lathrop, (Miss) H., Asst. Library, 604 Gilman St., P
[1]LAWSON, A. A., Asst. Prof. Botany, (429, 11) In Europe
†LENOX, L. R., Prof. Anal. Chem., (40c, 2-4) Mountain View
†Lesley, E. P., Instr. Mech. Eng., (260, 8:15-12:15) 471 Melville Ave., P
†Liggett, J. B., Instr. Foundry, (8:15-4:30, S. 9:15) 424 Lytton Ave., P
†Long, R. R., Instr. Hygiene,
(Gym., M. W. F. 11:15, 4-6; T. Th. 11:15, 5-6) Channing Lane, P
Lord, (Miss) C. M., Asst. History (225, 2-3) 526 Waverly St., P
[LYON, D. A., Asst. Prof. Metallurgy, Baird, Cal.]
[2]McCann, E. G., Asst. Hygiene 44 Encina
[2]McClelland, J. F., Act. Asst. Prof. Geology, 1001 Cowper St., P
McCracken, (Miss) M. I., Instr. Bionomics,
(433, 8:15-12:15) 14 Alvarado Row
†McDowell, J. E., Asst. Registrar, (116, 8:15-4:30) 9 Alvarado Row
McEwen, G. F., Asst. Physics, 640 Homer Ave., P
†MCFARLAND, F. M., Assoc. Prof. Histol., (480) 943 Scott St., P
McMurphy, J. I. W., Asst. Syst. Botany, College Terrace
†Manchester, F. A., Instr. English,
(206, M. W. F., 9:15) 667 Lytton Ave., P
MANNING, W. A., Asst. Prof. Appl. Math.,
(40, M. W. F. 11:15) 611 Waverly St.
[2]Marcus, (Miss) L., Asst. Library, 11 Alvarado

†Martin, E. W., Asst. Prof. Latin, (22, M. 11:15) 525 Lincoln Ave., P
Martin, (Miss) L. J., Asst. Prof. Psychology,
(401, T. Th. 4) 15 Salvatierra St.
†Marx, C. D., Prof. Civil Eng., (271, 8:15) 357 Kingsley Ave.
†Marx, G. H., Assoc. Prof. Mech Eng., (274, 9:15) 356 Lincoln Ave.
†Matzke, J. E., Prof. Rom. Lang.,
(242, M. W. F. 3:30) 1211 Bryant St.
Meston, A. F., Asst. Hygiene, 132 Encina
[1]Miles, (Miss) H., Supervisor Serials Library, 3 Alvarado Row
†Millis, H. A., Asst. Prof. Economics,
(221, M. T. 9:15, W. F. 11:15) 751 Channing Ave.
†Mitchell, J. P., Instr., Chem. (5c, 1:30-4:30) 235 Embarcadero Road
Mobley, (Miss) B. J., Asst. Library, 1 Salvatierra St.
[Moreno, H. C., Asst. Prof. Applied Math., In Europe]
Motley, J. M., Asst. Prof. Polit. Science,
(219, M. 9:15) 334 Kingsley Ave., P
Murphy, A. A., Asst. Library, 129 Encina
†Murray, A. T., Prof. Greek, (25, M. W. 10:15) 1019 Bryant St.
†Newcomer, A. G., Prof. English,
(205, T. Th. 11:15, W. 9:15) Forest Court, P
†Newsom, J. F., Assoc. Prof. Mining, (82) 1129 Cowper
Nye, (Miss) H. M., Asst. German, 455 University Ave., P
O'Brien, (Miss) M., Asst. Library, 14 Salvatierra St.
†Palmateer, T. J., Foreman Machine Shop, Mayfield, M
Palmer, F. R., Asst. Library, Welakahao, College Terrace
[2]Partridge, J. S., Lecturer in Law, Flood Building, San Francisco
Patterson, (Miss) L., Asst. Library, 604 Gilman St., P
†Peirce, G. J., Assoc. Prof. Botany, (467, W. 3:30) 943 Bryant St.
†Peterson, H. C., Curator Museum, 672 Homer Ave., P
[†Peterson, J. E., Foreman Forge, 660 Homer Ave., P]
Post, F. D., Asst. to Registrar, Encina
Post, (Miss) M. A., Asst. Dept. Geol. & Mining. 515 Everett Ave., P
†Price, G. C., Assoc. Prof. Zool., (446) 5 Salvatierra St.
[1]Pridham, E. S., Asst. Physics, Encina
[2]Provines, (Miss) C. D., Asst. Library, 22 Lasuen
Randall, (Miss) J. L. D., Asst. Hygiene, College Terrace
[†Rendtorff, K. G., Asst. Prof. German, In Europe]
Rice, E. W., Asst. Chemistry, 9a Salvatierra St.
†Rogers, A. F., Asst. Prof. Minerology,
(362, M. T. W. Th. 10:15) 727 Cowper St., P

†Rogers, F. J., Asst. Prof. Physics, (381) 4 Lasuen St.
[†Rolfe, H. W., Associate Prof. Greek, Menlo Heights]
Ross, P. A., Asst. Physics, College Terrace
Rossiter, (Miss) M., Asst. Library, 15 Lasuen St.
[2]Russ, (Miss) E. R., Asst. Hygiene, 15 Lasuen
Russell, (Mrs.) T. P., Instr. English, (211, 11:15) 12 Lasuen
[2]Rutledge, J. D., Asst Library, 8 Salvatierra St.
†Ryan, H. J., Prof. Elec. Eng., (262, 2-3) 9 Santa Inez St.
Sabine, G. H., Instr. Philosophy, (410, M. 2-3, Th. 9-10) 4 Lasuen St.
†Sanford, F., Prof. Physics, (382) 450 Kingsley Ave.
[2]Sawyer, E. W., Asst. Civ. Eng., 167 Encina
[†Searles, C., Asst. Prof. Rom. Lang., In Europe]
Sears, J. B., Asst. Education, 1527 Waverly St., P
Severy, (Miss) H. W., Asst. Hygiene, 10 Salvatierra St.
Seward, S. S. Jr., Asst. Prof. Engl.,
(208, T. Th. 11:15) 272 Kingsley Ave., P
[Show, A. B., Prof. Europ. Hist., In Europe]
†Skinner, M. M., Asst. Prof. German,
(32, M. W. F. 10:15) 10 Alvarado Row
†Sloan, W. H., Instr. Chemistry, (49c, 1:30-4:30) 235 Webster St., P
†Slonaker, J. R., Asst. Prof. Physiology,
(481, M. T. Th. F. 10:30) 334 Kingsley Ave., P
Smith, E. N., Asst. Dept. History, 12 Salvatierra St.
†Smith, J. P., Prof. Mineral. and Paleon.,
(62, 9:15-11:15, 2-4:30) 1335 Cowper St., P
†Snow, W. F., Assoc. Prof. Hygiene, (95, 9:15) 9 Salvatierra St.
†Snyder, J. O., Asst. Prof. Zool., (423) 627 Webster St.
†Stanley, E. J., Instr. Woodworking,
(500, 8:15-4:30) 453 Hawthorne Ave., P
Stanley, L. L., Asst. Physiol., 39 Encina
Starks, (Mrs.) C. L., Instr. Drawing,
(Studio, T. W. Th. F. 1:30-4:30) 1115 Ramona St.
†Starks, E. C., Curator Zoology, (426). 1115 Ramona St.
[2]Steel, D., Asst. Geol. and Mining, 460 Channing Ave., P
†Stillman, J. M., Prof. Chem., (44c, 2-4:30) 2 Alvarado Row
Stoltenberg, (Miss) C. S., Asst. Prof. Physiology,
(484, W. Th. F. 1:30-4:30) 7 Alvarado Row
Stolz, H. R., Asst. Pres. Office 222 Kingsley Ave.
[2]Streeter, (Miss) O. L., Asst. Hygiene, 29 Roble

†Stuart, H. W., Asst. Prof. Philosophy,
(416, M. W. 8:30, 11:15) 765 Channing Ave., P
Suter, J. D., Instr. Applied Math.,
(40, T. Th. 9:15) 455 University Ave., P
Sutliff, (Miss) H. B., Asst. Library, 15 Salvatierra St.
[Suzzallo, H., Asst. Prof. Educ., New York City]
†Swain, R. E., Assoc. Prof. Chem., (41c, 2-4) 638 Channing Ave., P
Taggart, A. F., Asst. Applied Math., 21 Lasuen
Theile, W. C., Asst. Dept. Mech. Eng., 8 Salvatierra St.
Thoburn, (Miss) H., Asst. Pres. Office, Santa Inez Ave.
[1]Thompson, (Miss) B. H., Supervisor Loan Desk Library,
909 Alma St., P
Thompson, J. I., Asst. Mech. Eng., College Terrace
†Townley, S. D., Asst. Prof. Applied Math.., (40) 575 Lincoln Ave., P
Townsend, (Miss) V., Asst. Roble Gym.,
(Gym., M. W. F. 11, 4-6) 414 Bryant St., P
Treat, P. J., Instr. Hist., (230, M. W. F. 10:45, T. 2) 9 Alvarado Row
Uhlman, W., Engineer, 420 Emerson St., P
[1]Upson, B. W., Asst. Civil Eng., 18 Lasuen St.
†Veblen, T. B., Assoc. Prof. Econ.,
(221, M. W. F. 12:15) Cedro Cottage
[1]Warren, H. C., Asst. Library, 154 Encina
Weaver, E. R., Asst. Chemistry, College Terrace
[2]Weymouth, F. W., Asst. Physiol., 32 Encina
[2]Wheeler, R. B., Asst. Library, 11 Lasuen St.
†Whitaker, A. C., Assoc. Prof. Econ.,
(220, 10:15) High St. and Embarcadero Road
[2]Williams, F. X., Asst. Entomol., 1015 Scott St., S. F.
Williams, (Miss) M. W., Asst. Hist., 459 Channing Ave., P
Williams, P. H., Lab. Attendant Elec. Eng., College Terrace
[2]Wiltz, (Miss) B. A., Asst. Entomology, 523 Homer Ave., P
Wing, C. B., Prof. Struct. Eng.,
(261, M. W. F., 10:15) 345 Lincoln Ave
[2]Woodruff, (Miss) M. J., Stenog., Library,
†Woodward, F. C., Prof. Law, (4, M. W. F. 11:15) 904 Cowper St., P
Wright, (Miss) A. L., Asst. Math., College Terrace
†Young, A. A., Assoc. Prof. Econ.,
(222, M. W. F. 10:15, Th. 2-2:30) 1027 Emerson St., P
†Young, S. W., Prof. Physical Chem.,
(46c, 9:30-12, 2-4) 846 Bryant St.

BUSINESS OFFICE

Ames, E. M., Voucher Clerk,	8 Alvarado
Beebe, H. W., Office Manager,	21 Lasuen
Blodgett, D. P., Bookkeeper,	466 Ruthven Ave.
Hadden, (Miss) F., Stenographer,	1157 Ramona St.
Knight, A., Auditor,	502 California St., S. F.
Lathrop, C. G., Treasurer and Business Manager,	Alta Vista
Monasch, D., Purchasing Agent,	Union Trust Building, S. F.
Rich, S. H., Cashier,	1158 Ellis St., S. F.
Worsley, R. H., Storekeeper,	5 Lasuen St.
Dorgan, M. H., Chief Plumber,	Mayfield
Hallett, E. M., Foreman Farm,	Stanford University
Hamilton, R., Chief Carpenter	Mayfield
Heisel, P. J., Chief Electrician,	Palo Alto
Hughes, C. P., Chief Engineer,	Cooksey Lodge
Lanktree, (Mrs.) L. H., Matron Roble Hall	Roble
Miller, C. F., Chief Gardener,	315 Lytton Ave.
Quinn, A. A., Clerk Encina,	553 Forest Ave.
Scott, T. B., Storekeeper of Chemical Laboratory,	Mayfield
Stevens, F. A., Foreman Mechanician Shop,	430 Tasso St.
Tulley, P. J., Chief Painter,	Menlo Park
Witherell, J. S., General Superintendent,	Stanford University

STUDENTS

Name; home residence; major subject; status; University residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('P' indicates *Palo Alto* post-office; 'Mayfield, M,' *Mayfield* post-office; etc.). Street address *Palo Alto* or *Campus* unless otherwise named.

Status—gr., graduate student; sp., special student. The figures after major subject indicate the number of units of university work completed (and counting toward the 120 units required for graduation), no account being taken of 'deferred,' 'incomplete,' or 'conditioned' work. The dagger (†) indicates unadjusted standing from other colleges and universities. (Phys.=Physics; Phyl.=Physiology.)

The superior number [1] prefixed to the name of a student indicates registration for the first semester only; [2] indicates second semester only.

Abright, Anne Pauline : Palo Alto, Lat., 90, 651 Waverly P
Abright, William Worden : Palo Alto, C. E., 63, 651 Waverly P
Acheson, Barbara Katherine : Eureka, Math., 91, Manteista
Acker, Frank V. : San Francisco, C. E., sp., 11, College Ter.
Ackley, Forrest Marlin : Glendale, Draw. sp., 35, K. Alpha
[2]Adam, Edward Niles : Bigtimber, Mont. E.E., Chaffee Club
Adams, Eleanor Pitchlynn: Long Beach Engl., 12, Walden Club
Adams, Frederick Archibald : Alameda, Law, 22, 69 Encina
Adams, Morgan Orland : Los Angeles, Econ., 104, D. K. Epsilon
Adams, Olga : Los Angeles, Hist., 66, Pi Beta Phi
Adams, William Welsh : Palo Alto, Geol., 76, 430 Homer P
Agnew, Thomas Hugh : Stanford Univ., C.E. D. K. Epsilon
Akins, Charles Frederic : Redlands, C E., 14, Welakahao Club
Albrecht, Gertrude : San Francisco, Law, 98, 3 Madroño
[1]Album, Leon : San Jose, Engl. sp., San Jose, S
Aldridge, Mabel : Palo Alto, Engl., 99, 413 Emerson P
Alexander, Jeanette W. : Susanville, Hist., 9, 2 Madroño
Allen, Clarence Alan : Portland, Ore., Engl., 40, Phi Gamma D
Allen, Harvey Abner : Astoria, Ore., E.E., 6, Kappa Alpha
Allen, Howard Frank : Stockton, Hist., 33, 156 Encina
[1]Alsua, Francisco y Madrid : Berkeley, C.E.† 329 University P
Alvord, John Hartwell : Ventura, Law, 91, 707 Bryant P
Ambrose, Oliver Stephens : Lockeford, E.E., 81, 21 Lasuen
Amick, Myrtle Elisabeth : Oceanside, Hist., 112, Manteista
[1]Anderson, Cecil Melville : Salinas, C.E., 31, 64 Encina
Anderson, Fred'k M. : Grosse Ile, Mich., Frn., 15, 20 Lasuen
Andrews, Elizabeth Melvina : Corona, Math., 105, 22 Lasuen

Andrews, Frank Elmer : Colton, C.E., 42, 22 Encina
Andrews, Jesse Lee : Los Angeles, Econ., 12, Boat House
[1]Aniya, Seishu : San Francisco, Econ., 63, Japanese Club
[1]Anju, Shohachi : Saga : Japan, Econ. gr., Forest Court
A. B., Stanford, 1908.
Arakawa, Santaro : San Francisco, C. E., 4, 208 Univ. Av., P
Ardzrooni, Leon : Fresno, Econ., 54, 51 Encina
Armstrong, James : San Jose, C. E.†, 13, P. D. Theta
[1]Arnold, Medford Roop : Susanville, Law, 5, 1022 Webster P
Arnott, John David : Palo Alto, Math., 15, 424 Seneca P
Arrell, Dell Bernie : Stanford Univ., Geol., 25, Phi Gam. Delta
Ashley, Freelin Hightower : Altadena, Engl., 15, 525 Channing P
Atkinson, Arthur Garratt : Saratoga, C. E., 7, 764 Channing
Atkinson, Irving Marshall : Saratoga, C. E., 13, 764 Channing
Avery, Lewis Gordon : Los Angeles, Econ., 29, 151 Encina
Babcock, David Thornton : San Diego, Law, Delta Upsilon
Bacon, Cora Angeline : San Jose, Hist., 14, 5 Roble
Bacon, Howard Little : San Jose, Law, 34, 241 S 1st, S J., S
[1]Badger, Charles Kilgore : Bakersfield, E. E. sp., 4, Fire House
[1]Bailey, Bertha Coville : Palo Alto, Germ. gr., 406 Ramona P
A. B., Stanford, 1908.
Bailiff, Julia May : Banning, Engl., 102, 24 Roble
Bairos, Manuel Benjamin : Biggs, Chem., 67, Welakahao Cl.
Baker, Mary Caroline : Point Loma, Phyl., 102, K. A. Theta
Baker, Thomas Childrey : Los Angeles, Geol., 77, 179 Encina
Baldwin, Earl Milton : Palo Alto, E. E., 114, 551 Hamilton P
[1]Baldwin, Walter Charles : Red Oak, Ia., Geol., 153 Encina
[1]Ball, Chester Alexander : Woodland, Law gr., 405 Emerson P
A. B., Stanford, 1907.
Ball, Bertrand Logan : Los Angeles, Law, 13, Kappa Sigma
Ball, Gerald Lamont : Woodland, C.E., sp., 11, 405 Emerson P
Ballagh, Ahlida Grayson : Oil Center, Lat., 16, 526 Forest P
Ballard, Carl McNeilan : Seattle, Wash., Law, 9, Delta Upsilon
Balsbaugh, Mary Alice : Palo Alto, Lat. gr., 718 Webster P
A. B., Stanford, 1908.
Baltzell, Walter Thomas : Decatur, Ind., Engl., 16 Salvatierra
Banta, Earl Lott : Imperial, Econ., 9, 227 Bryant P
Barbour, Nathan Powell : Lockeford, Chem., 96, 405 Kipling P
[2]Barbur, LeRoy Wright : Los Angeles, Geol., 80, 109 Encina
Bardin, Hazel Jane : Salinas, Draw., 41, 16 Roble
[1]Barker, Earl Wright : San Jose, Chem., 22, San Jose S

Barker, Iva Lois : San Diego, Educ., 42, 324 Emerson P
Barkley, William Sherritt : Los Angeles, Law, 66, Sigma Nu
[1]Barlow, Edna Alice : Los Angeles, Hist., 26, K. A. Theta
Barlow, Maybelle Bertha : Los Angeles, Hist., 38, K. A. Theta
[1]Barlow, Oran M. : Greenville, Tex., C. E. sp., 3, Cardinal Club
[1]Barnes, Gladys Wolcott : Sacramento, Hist., 79, 30 Roble
Barnes, Katherine Whitney : Oakland, Econ., 20, Walden Club
Barneson, John Leslie : San Mateo, Law, 12, Sigma Nu
Barnhart, Della Carra : Coyote, Engl., 38, 62 Roble
[2]Barrow, Frank Elliott : Los Angeles, Law, 515 Waverly P
Barton, Jesse B., Jr. : Hinsdale, Ill. C. E., 35. 707 Bryant P
Bateman, William G.: Salt Lake City, U., Chem. gr., 12 Encina
A. B., Stanford, 1907.
Bates, Athene : Davisville, Lat., 13, K. K. Gamma
Bates, Callie Hildred : Lawrence, Germ gr., Lawrence L
A. B., Stanford, 1908.
Bates, Frank Thomas : Rialto, Law, 99, 97 Encina
Bates, Lloyd : Portland, Ore., M. E., 14, 5 Lasuen
Batkin, Paul Jay : Riverside, Law, 40, 85 Encina
Batterson, Sheldon Morse : Pasadena, Law, 37, Delta Upsilon
Bayley, J. Garfield : San Jose, Educ., 43. 35 Encina
Bazet, Emma Rosalie : San Francisco, Hist., 12, 1 Alvarado
[2]Beach, Fred'k H. : Mt. Hermon, Mass, Engl., 626 Gilman P
Beard, Ethel Grace : Modesto, Germ. gr., 17 Roble
A. B., Stanford, 1907.
Beard, Grace R. : Minneapolis, Minn., Germ. 90, G. Phi Beta
[1]Beard, Harold W. : Hutchinson, Kan., Econ., 35, Beta Theta Pi
Beardsley, Charles A. : Campbell, Law gr., 146 Encina
A. B., Stanford, 1906.
Beaufait, Allen Francis : Los Angeles, E. E., 12, 1121 Bryant P
Beckley, Reuben Elmer : Ukiah, M. E., 44, 22 Encina
[2]Beckwith, Genevieve : Eureka, Frn., Manteista
[1]Beeger, Gertrude M. : Redwood, Germ. gr., Redwood R
A. B., Stanford, 1908.
Beeger, Lulu : Redwood, Germ., 46, Redwood R
Beeger, Pauline Maric : Redwood, Phyl., 91, Redwood R
[2]Behlow, Wm. Wallace : Redlands, Chem. gr., P. Delta Theta
A. B., Stanford, 1907.
[2]Belcher, Raymond T. : Prescott, Ariz., C. E., 342 Homer P
Belieu, Virgil Ray : Compton, Law, 27, 219 Ramona
Belknap, Dita : San Francisco, Hist., 39, 51 Roble

Bell, John Henry : Palo Alto, Geol., 56, 620 Gilman P
Bell, Linda May : St. Helena, Hist., 15, LaCamaraderie
Bellah, Samuel Harrison : Hanford, C. E., 2, 166 Encina
Bellows, Vergil Franklin : Cleveland, O., Draw., 55, P. Gam. Delta
Bennett, Lyman H. : Virginia City, Mont. Law, 102, 709 Bryant P
Bennett, Thomas T. : Marshfield, Ore., Law, 86, Sigma Chi
Benson, Carl Henry : Redlands, M. E., 38, 64 Encina
Benson, Caroline : Portland, Ore., Engl., 106, Gam. Phi Beta
Berger, Alice Ruth : San Jose, Chem., 100, 73 N 6, S J, S
Bernard, Fred Horton : Tucson, Ariz., Law, 114, Delta Tau Delta
Berry, Samuel Stillman : Redlands, Zool., 78, 94 Encina
Bevier, George Jr. : Spokane, Wash., Math., 15, Encina
Bianchi, Adolphus Benjamin : Cambria, Law, 46, 148 Encina
'Bias, Stanley Clayton : San Francisco, Hist. sp., 56, Kappa Alpha
Bickel, Basil Fritz : Chicago, Ill., Econ., 7, Phi Gam. Delta
Biethan, Leonore Louise : Blackfoot, Id., Chem.†, 13, LaCam'derie
Bille, Anna Matilda : Palo Alto, Engl. gr., 170 Waverly P
A. B., Stanford, 1908.
Bille, Elsie Margaret : Palo Alto, Engl., 16, 170 Waverly P
Bille, Mary Elizabeth : Palo Alto, Math., 106, 170 Waverly P
'Billwiller, Ernest O. : New York, N. Y., C. E.†, 5, 515 Waverly P
Binder, Hazel Mignon : Alameda, Engl., 74, Manteista
'Bingham, Florence Cornell : Palo Alto, Law gr., 1037 Ramona P
A. B., Cornell University, 1906.
'Binkley, Ralph Putnam : Hollister, Econ., 19, 179 Encina
Binkley, Tholow : Hollister, Phyl., 32, 34 Encina
Binns, Clyde Arthur : Palo Alto, Geol., 66, Cong. Church P
Birch, Catherine Ida : Redlands, Lat., 11, LaCamaraderie
Blake, George Albert : Palo Alto, Geol. sp., 8, 515 Waverly P
'Blake, Thomas Barnard : Palo Alto, Phyl., 35, Encina
Bland, Lotta L. : San Jose, Zool., 11, 15 Roble
Bliven, Bruce Ormsby : Emmettsburg, Ia., Engl., 11, 1103 Ramona
Blodget, Ruth : Bakersfield, Hist., 76, Manteista
'Blood, Herbert Theodore : Denver, Col., Hist., gr., Sigma Nu
A. B., Stanford, 1908.
'Blood, John Nelson : Burlingame, E. E., 3, Burlingame B
Blood, Walter William : Denver, Colo., Law, 72, Sigma Nu
Blythe, Ethel Saxe : San Jose, Draw., 10, San Jose S
Boal, Helen Dickinson : National City, Engl., 8, 8 Madroño
Boatright, William Lewis : San Jose, Law sp., 9, 45 Vine, S J, S
Bobo, Lonnie Adelbert : Selma, E E., 29, 38 Encina

Bodley, Grace Majella : San Jose, Hist. gr., 339 N 3d, S J, S
A. B., Stanford, 1907.
[1]Boezinger, Bruno : Palo Alto, Germ. gr., 176 Bryant P
A. B., Fort Worth University, 1893; A. M., 1896.
Bohart, George S. : Clinton, Ia., Chem., 30, 191 Encina
Boobar, Elwood Campbell : San Fran., Econ., 28, Delta Upsilon
Boothe, Genevieve : Colton, Engl., 100, 53 Roble
[1]Borden, Rhodes : Madera, Law, 359 Emerson P
Borland, Oral William: San Bernardino, C. E., 13, 18 Encina
Borland, Robert H. : San Bernardino, Law, 107, 169 Encina
Borough, Anne Elise : Palo Alto, Lat., 41, 760 University P
Borough, Edwin Wallace : Palo Alto, C. E., 83, 142 Encina
Bothwell, Zayda E. : Salt Lake City, U., Germ., 43, Manteista
[1]Botsford, Lucy Esther : San Jose, Educ., 11, 450 S 2d, S J, S
Boudinot, Edward Elias : Escondido, C. E., 14, Lewis Club
Boundey, Elwin James : San Jose, Geol., 9, 227 Bryant P
[2]Bowman, Samuel Howard : Redwood, Chem. Redwood, R
Boyd, De Estraye Cassell : San Jose, Econ., 82, Marchmont Cl.
Boyd, Harold Edward : Milpitas, C. E., 15, 56 Encina
[2]Boyden, Clifford Junius : Hollywood, C. E. sp., Entre Nous
Boyers, Luther : Decatur, Ind., Engl., 43, Cardinal Club
Boyle, John Clarence : Escondido, Law, 68, Lewis Club
Boyle, Lewis Vincell, Jr. : Escondido, Econ., 64, Lewis Club
[2]Boyle, Margaret Louise : Escondido, Engl., College Terrace
Boyle, William Archdall : San Rafael, Geol., 10, 11 Alvarado
Brackett, Ross Dudley : Pasadena, E. E., 115, 12 Encina
[1]Brackett, William Franklin : Pasadena, Geol., 50, 13 Encina
Bradford, Clarkson Beem : Ottawa, Ill., Econ., 51, Phi Delta Theta
Bradley, Paul F. : Ukiah, M. E., 8, 38 Encina
Brady, Emmett James : Columbia, Phyl., 38, 16 Salvatierra
[1]Brainard, Gertrude G. : Los Angeles, Engl., 47, Gamma Phi Beta
Branner, Elsie : Stanford University, Hist., 104, 13 Alvarado
Branner, John K. : Stanford Univ., Geol., 59, 13 Alvarado
Brassy, Lucien Peter : San Jose, M. E., 44, Box 636, S J, S
[2]Brayton, Martha Jane : Palo Alto, Engl., 401 Emerson P
Breer Carl : Los Angeles, M. E., 84, S. Alpha Epsilon
Breton, Edith Lillian : Morgan Hill, Bot., 99, 324 Emerson P
Brinton, Margaret : San Diego, Math., 76, 14 Salvatierra
[1]Brinton, Walter F. : Stanford Univ., C. E., 26, 91 Encina
Britton, Raymond Morris : Lawrence, Hist. gr., Lawrence L
A. B., Stanford, 1907.

Brohaska, Catherine M. : San Jose, Engl., 103, 124 D'Ims, S J, S
Brooke, Robert D. : Spokane, Wash., E. E., 77, Phi Kappa Psi
Brooks, Joseph James : Colusa, C. E., 54, 405 Emerson P
Brooks, Milton Jay : Santa Rosa, E E., 112, 53 Encina
Brower, Irving King : Bakersfield, Law, 75, 50 Encina
Brown, Earl Daniel : Campbell, C. E., 13, College Terrace
Brown, Edna Lucile : Rockford, Ill., Germ., 103, Delta Gamma
[1]Brown, Floyd Cromwell : Selma, E. E., 14, 359 Emerson P
[1]Brown, Harold Ralph : San Francisco, Law, 94, 126 Encina
Brown, Herbert : Terminal Island, M. E., 10, Beta Theta Pi
Brown, Roger Houssels : Duarte, C. E., 47, 89 Encina
Brown Samuel Windsor : San Jose, Educ. gr., 423 S. 4th, S J, S
A. B., Stanford, 1907.
Browne, Mae : Rhinelander, Wis., Germ., 68, Delta Gamma
[2]Brownell, Deede D. : Los Angeles, Chem., 8 Alvarado
Bruce, Grace : Elmira, N. Y., Phil. gr., College Terrace
A. B., Vassar College, 1902; A. M., Elmira College, 1904.
Bruning, Harry Frederick : Oakland, Law, 61, S. Alpha Epsilon
Brunton, Mary Cecelia : Stanford Univ., Engl., 65, Pi Beta Phi
Bryan, Mary K. : Anacostia, D. C., Bot., 110, 30 Roble
Bryan, Norris Pinkney : Stanford Univ., Law, 97, 80 Encina
Bryan, Samuel : Stanford University, Econ., 54, 85 Encina
Bubb, John Boulware : Mountain View, M. E., 46, 64 Encina
[1]Buch, Francisco : Mexico City, Mex., C.E., 3, Santa Clara C
Buchan, Dean Winslow : Palo Alto, Chem., 66, 261 Homer P
[1]Buckingham, Elizabeth Lee : Palo Alto, Engl., 67, 7 Salvatierra
Buell, Henry H. : Stockton, E E., 82, 21 Encina
Bumgarner, Jesse A. : Stanford Univ., E. E. sp., 37, Acacia
Bundy, Sarah Elizabeth : Los Angeles, Engl., 30, G. Phi Beta
[2]Bundy, Eudora B. : Stanford University, Lat. gr., 7 Lasuen
A. B., Stanford, 1907.
Burbank, Daniel Wellman : Palo Alto, Law, 63, 127 Encina
Burbridge, Harry Carleton : Palo Alto, Phys., 111, 640 Homer P
Burcham, William David F. : Palo Alto, Geol., 41, 161 Encina
Burgren, Arthur William : San Fran., Geol., 69, 24 Encina
Burgunder, Robert Marcus : Colfax, Wn., Law, 45, 182 Encina
Burke, Charles Victor : Palo Alto, Zool. gr., 603 Lytton P
A. B., Stanford, 1907.
Burke, Mabel Claire : Palo Alto, Draw., 74, 603 Lytton P
Burke, Villa Marie : Los Angeles, Engl.†, 3, Alpha Phi
[1]Burke, Winifred Margarita : San Mateo, Lat., 13, San Mateo S

Burkhalter, Frances C. : Los Angeles, Hist., 44, K. K. Gamma
Burnham, Theda Abbott : San Diego, Engl., 34, 51 Roble
Burr, Clyde Russell : Monrovia, Law, 12, 202 Encina
Burrell, Florence Cotton : Oakland, Ent., 37, K. A. Theta
[1]Burrell, Logan : Portland, Ore., Geol., 7 Encina
[1]Burritt, Edwin Wheeler : Palo Alto, C. E., 30, 526 Forest P
Burritt, Elizabeth Sophia : Palo Alto, Lat., 110, 526 Forest P
Bursk, Herbert Lee : Riverside, Engl. sp., 80, 235 Emers'n P
[1]Burtis, Prentis Townsend : Ross Valley, Econ. gr., D. K. Epsilon
A. B., Stanford, 1908.
Burtt, Payson Dodge : Oakland, Geol., 79, 13 Encina
Bush, George Barnard : Riverside, Law, 70, 90 Encina
Bushnell, Asa Nash : San Diego, Econ. sp., 7, Zeta Psi
Byrd, Edward Leroy : Santa Barbara, E. E., 11, 37 Encina
Cáceres, Simon Novelo : National City, Math., gr., 361 Addison P
C. E., Rensselaer Polytech. Inst., 1898.
[1]Caddagan, Donald : Los Angeles, Econ., 4, Delta Tau Delta
Cadwalader, Theodore R. : Los Angeles, Econ., 50, Beta Theta Pi
Calkins, Laurence G. : Los Angeles, C. E., 19, 549 Cowper P
[2]Camp, Grace Cleone : Palo Alto, Ent., gr., 559 Cowper P
A. B., Stanford, 1905.
Camp, William Roswell : Palo Alto, Econ., 77, 559 Cowper P
Campbell, Helen : Menlo Park, Hist., 15, Menlo Park
Campbell, Homer Ward : San Jose, Educ., 15, College Terrace
Campbell, Jesse Eugene : Adin, Law gr., 57 Encina
A. B., Stanford, 1906.
Canterbury, Harry Horton : Redlands, M. E., 39, 49 Encina
Cantrell, Russell W. : San Francisco, Law sp., 26, 310 High P
Carden, Lester Lincoln : Santa Ana, Econ., 11, Kappa Alpha
Carleton, Henry G. : Minneapolis, Minn., Law, 99, 4 Lasuen
Carpenter, John Emil : Mountain View, E. E., 118, 325 Hamilton P
Carpenter, Mark A. : Ukiah, Law, 28, 148 Encina
Carpenter, Mabel H. : Los Angeles, Engl. 9, 10 Roble
Carpenter, Nelson K. : Escondido, C. E., 107, Villa de Lag'nta
[1]Carraher, Mortimer G. : Seattle, Wash., Law, Phi Delta Theta
Carroll, Agnes Gertrude : San Jose, Engl., 44, 247 S 8th, S J, S
Carson, Marion Vroom : Palo Alto, Engl., 35, 181 Addison P
[1]Carson, Merwin Bishop : Palo Alto, C. E., 22, 181 Addison P
Carter, Bonnie : Fresno, Germ., 56, Pi Beta Phi
[1]Carter, John Noble : Palo Alto, Law, 29, 559 Cowper P
[2]Carter, R. A. : Fresno, Law sp., 58, Encina

Cary, Edward Guilford : Palo Alto, Phyl. sp., 31, 92 Encina
Case, Alexander Truman : Corning, Chem., 44, 158 Encina
Case, Inez : Portland, Ore., Engl., 79, 66 Roble
[2]Case, Josephine : Los Angeles, Hist., 1 Alvarado
Case, Mabel : Portland, Ore., Math., 39, 66 Roble
Cashbaugh, William Augustus : Bishop, Geol. sp., 63, 46 Encina
Caskey, Emily J. : Tacoma, Wash., Hist., 11, K. K. Gamma
[2]Cass, Phil. : Los Angeles, Law, University Hotel P
[1]Cassell, John Francis : San Francisco, Law, 98, Delta Tau Delta
Caswell, Albert Edward : San Jose, Phys., gr., 2 Lincoln, S J S
A. B., Stanford, 1908.
[1]Center, Inez : Lawrence, Hist. gr., 255 Lytton P
A. B., Stanford, 1907.
Chaffee, Burns Stoddard : Garden Grove, Phyl., 99, Chaffee Club
Chamberlain, Kendrick : Los Angeles, Law, 9, Delta Upsilon
Chamberlin, Cora Eva : San Leandro, Engl., 72, 26 Madroño
Chandler, Clayton Isaac : Selma, Geol., 114, 107 Encina
[2]Chandler, Helen M. : Mills College, Engl., 50 Roble
Chandler, Robert Bowman : Los Gatos, C. E., 113, Los Gatos, L
Chao, Chang-Kwang: Hangchow, China, Econ., 74, 318 Lytton P
Chapman, Alice Louise : Redlands, Frn., 50, 27 Roble
Chapman, John Frye : Redlands, Law, 91, 100 Encina
[1]Charlebois, Emma Eulalie : Ventura, Hist. gr., Gamma Phi Beta
A. B., Stanford, 1907.
Chase, Elmer Ellsworth : San Jose, Geol., 10, Zeta Psi
[2]Cheda, Gilbert E. : San Luis Obispo, Geol., 16, Encina
Cheda, Henry P. : San Luis Obispo, Geol., 31, 133 Encina
Cheney, Everett Wethered : Reno, Nev., Law, 16, 8 Alvarado
[1]Cheng, Keh Ching : Shanghai, China, Econ. sp., 7, 318 Lytton P
[2]Christensen, Carlo P. : Whitefish, Mont., E. E., 28, 318 Emerson P
Christin, Charles A. : San Francisco, Law, 13, 170 Encina
Chuck, Albert Hong : Heung Shan, China, C. E., 18, Stanford Res.
[2]Churchill, Hugh R. : Spokane, Wash., Hist., Phi Kappa Psi
Clark, Claudia L. : Redlands, Hist., 105, 19 Madroño
Clark, Edna Ellita : Ventura, Hist., 14, 64 Roble
Clark, Eldred James : San Jose, Econ., 70, Minn Av., S J, S
Clark, Eva Belle : Fresno, Germ., 42, Madroño Hall
Clark, Gladys Willamary : Gilroy, Draw., 14, La Camaraderie
Clark, Howard Foster : Redlands, C. E., 120, 187 Encina
Clark, Lester Percy : Redlands, M. E., 13, 187 Encina
[1]Clark, Letitia Macelia : San Jose, Hist. gr., 727 Bryant P
A. B., Stanford, 1908.

Clark, Neil Coffin : Prescott, Ariz., Law, 10, 342 Homer P
Clarke, Effie May : Riverside, Educ., 72, College Terrace
Clarke, James Maxwell : San Francisco, M. E., 78, Delta Upsilon
[2]Clay, Mabel Adalene : San Francisco, Hist.†, 4 Madroño
Clements, Paul H. : Indianapolis, Ind., Law sp., 50, 171 Encina
[1]Clifford, Hazel Grant : San Francisco, Lat., 13, La Camaraderie
[1]Cline, William Henry, Jr. : Los Angeles, Econ., 5, Phi Delta Theta
Clingan, Dennis A. : Georgetown, Ill. Law gr., 8 Alvarado
A. B., University of Illinois, 1907.
Clithero, Jennie Ethel : Stanford Univ., Germ., 107, Manteista
[1]Clowe, Charles Edward : Woodland, Geol., 44, Phi Gamma Delta
[2]Cobert, Albert : Chicago, Ill., Germ., Kappa Sigma
Coburn, Albert Charles : Stanford Univ., Hist. sp., 23, Marchmont
Cochran, Lex Hugh : San Bernardino, M. E., 41, Phi Delta Theta
Coddington, Albert A. : San Bernardino, M. E., 15, 545 Bryant P
Coe, Arthur Frederic : Los Angeles, Law, 79, 4 Encina
Coe, George Clifford : Portland, Ore., Phyl., 104, 178 Encina
Coffin, Emily Lee : San Francisco, Hist., 12, 16 Alvarado
Coffin, Ethelbert L. : Salt Lake City, U., Geol., 8, Phi Kappa Psi
[2]Coffman, Henry Willson : Healdsburg, E. E., 23, 318 Emerson P
Cogswell, Jessie Flavia : Riverside, Lat., 85, 23 Madroño
Cole, Amos Newton : Du Bois, Penn., Chem., 87, S. A. Epsilon
Cole, Ernest Delevan : Santa Ana, C. E., 102, 109 Encina
Cole, Waldo Carnahan : Palo Alto, E. E, 70, 56 Encina
Colestock, Harry Ludwig : Palo Alto, Engl gr., 253 Homer P
A. B., Columbia University, 1904.
Collins, William Alexander : Chico, Bot., 6, Acacia
Collis, William E., Jr. : Chester, N. J., Geol., 3, Cardinal Club
Colwell, Maynard R. : Eureka, C. E., 62, Acacia
[2]Conlin, William Harold : San Francisco. Econ., 359 Emerson P
Conrad, Warren Cross : Los Angeles, Law, 50, 545 Bryant P
[1]Considine, John Arthur : Seattle, Wash., Law 319 Alma P
Converse, Edna J. : Brookhaven, Miss., Hist. gr., K. K. Gamma
A. B., University of Michigan, 1906.
Conway, Daniel F. : Stanford Univ., Law sp., 32, 103 Encina
Cook, Archibald B. : Santa Barbara, C. E., 44, 195 Encina
Cook, Mills Peirce : San Francisco, Hist., 10, Phi Gamma Delta
Cook, Newton Dana : Santa Barbara, M. E., 110, 195 Encina
*Cooley, William M. : Kalispell, Mont., E. E., 66, 318 Emerson P
Coolidge, Ernest Lynn : Palo Alto, C. E., 111, 660 Waverly P

* Died, February 5, 1908.

Coolidge, Grace Burr : Palo Alto, Lat., 73, 660 Waverly P
[2]Coombe, Mary Edith : San Francisco, Hist., 1 Alvarado
Coonan, Clarence : Eureka, Law, 70, Delta Upsilon
Coonradt, Arthur Chapin : Riverside, M. E., 79, 160 Encina
[2]Cooper, Alice Cecilia : Los Angeles, Engl. gr., Manteista
A. B., Stanford, 1907.
[1]Cooper, Frederic Hopkins : Claremont, Law gr., Encina
B. L., Pomona College, 1906.
[2]Cooper, Jane Lawrence : Alameda, Germ., 20 Madroño
[1]Coover, Margaret Brooks : Dixon, Germ. sp., 84, 11 Salvatierra
Costar, Garrison : Chico, C. E., 63, 523 Cowper P
[1]Costar, Lloyd : Chico, Geol., 3, 523 Cowper P
Couch, Mary Juanita : Vacaville, Bot., 70, 297 N 3d, S J, S
Cowin, James : Minneapolis, Minn., Geol. gr., 4 Lasuen
E. M., University of Minnesota, 1907.
Cox, Albert Brooks : Joplin, Mo., E. E., 102, 318 Emerson
Cox, Anna Shipley : San Jose, Lat., 83, 855 Chapm'n, S J, S
Cox, Catharine Morris : San Jose, Germ., 10, 855 Chap'n, S J, S
Cox, George Norris : Hollister, Law, 27, Phi Gamma Delta
Cox, Lester Everett : Portland, Maine, Bot., 72, 20 Lasuen
Cox, Mabel Lucille, San Bernardino, Hist., 66, 617 High P
Coy, Owen Cochran : San Jose, Hist. gr., 21 Villa, S J S
Ph. B., University of Pacific, 1907.
Cramer, Harry Putman : Portland, Ore., E. E., 38, 128 Encina
Cramer, Thomas Meredith : Palo Alto, Chem., 16, 2 Chan'g Lane P
Crandall, Archie Cole : Palo Alto, M. E., 6, 737 Waverly P
[2]Crandall, Esther Mae : Palo Alto, Psych., gr., 948 Ramona P
A. B., Stanford, 1903; A. M., 1905.
[1]Crandell, Ethel May : Redlands, Lat. gr., 959 Bryant P
A. B., Stanford, 1908.
Crane, William Frank : Fallbrook, M. E., 101, 58 Encina
Crary, Allan Hodgdon : Los Angeles, Econ., 8, Kappa Sigma
Craven, Leslie : Bellingham, Wash., Law, 74, 7 Encina
Crawford, Antoinette : San Francisco, Engl., 109, 15 Salvatierra
Crawford, David Paul : Cupertino, C. E., 44, 71 Encina
Crawford, Fred William : San Jose, Law, 82, Curtner Av, S J, S
Crawford, James Porter : San Jose, Phyl., 80 E St. John, S J, S
Crawford, Perry Orson : Los Angeles, E. E., 104, 131 Encina
Crellin, Earle Adair : Pleasanton, E. E., 15, Zeta Psi
Croghan, Margaret Anna : Eureka, Lat., 55, 704 Bryant P
[1]Crook, Arta B. : Glenwood Springs, Col., Lat., 11, 760 Bryant P

Crcop, Arthur M. : San Jose, Educ., 101, 307 N 1st, S J, S
[1]Crosier, Mildred Irene : Santa Ana, Engl. gr., 11 Salvatierra
A. B., Stanford, 1908.
Cross, Donella Mary : Mayfield, Lat., 38, Evergreen Park
Cross, Ira Brown : Madison, Wis., Econ. gr., 146 Encina
A. B., University of Wisconsin, 1905; A. M., 1906.
Cross, Robert John : Mayfield, Chem., 41, Evergreen Park
Crowder, Clifford Lee : Chico, Law gr., 523 Cowper P
B. L., University of California, 1905.
Crowell, Mary Dean : Los Angeles, Draw., 15, Alpha Phi
[1]Crumby, Elizabeth Julia : Redlands, Hist. gr., Delta Gamma
A. B., Stanford, 1908.
Cruzan, Harold Ide : San Francisco, Law gr., Encina
A. B., Stanford, 1906.
[2]Cuenin, Emile Francis : San Francisco, Econ., 182 Encina
Cullen, Edward James : Gilroy, C. E., 6, Welakahao
Culver, Clifton F. : Stanford Univ., Law sp., 90, Welakahao
[2]Culver, Kathryn Lee : Oakland, Engl., 40, K. A. Theta
Cummings, Ernest John : Carpinteria, Grk.†, 14, 93 Encina
Cummins, Russell Woodworth : Covelo, C. E., 100, 141 Encina
Cunha, Edward Anthony : Oakland, Law gr., 19 Encina
A. B., Stanford, 1907.
Cunningham, May Alice : Sacramento, Frn., 105, K. K. Gamma
Curry, Bessie Alberta : San Jose, Phyl., 39, San Jose, S
Curtin, Francis Andrew : Elmira, N.Y., Law, 104, Chi Psi
Cushing, John Eldridge : San Rafael, Law, 106, Chi Psi
Cuthbertson, Alice Bertha : Palo Alto, Germ., 75, 638 Channing P
Cuthbertson, Alexander M. : Manchester, Chem., 69, 638 Channing P
Dalzell, William C. : Omaha, Neb., Law, 15, 334 Cowper
[2]Damerel, Bright Spencer : Ocean Park, Econ., 9, 139 Encina
Darby, Marian Maud : San Jose, Frn., 10, Gamma Phi Beta
Das, Khagendra C. : Mayfield, Chem.†, 26, College Ter.
Daugherty, Robert Long : Redondo, M. E., 97, 235 Emerson P
Dauser, Sue Sophia : Fullerton, Hist., 14, 611 Bryant P
[1]David, Marguerite : Hamilton, Mont., Engl., 98, 454 Hamilton P
Davidson, William Mark : Porterville, Ent., 49, 704 Bryant P
Davies, William Evan : San Francisco, Law sp, 24, 310 High P
[1]Davis, Allen Harte : Kalispell, Mont., E. E., 318 Emerson P
[2]Davis, Dwight Moody : Kansas City, Mo., Hist., 81, Phi Kappa Psi
Davis, Edna Grayce : Palo Alto, Engl., 56, 467 Hamilton P
Davis, E. May : Crockett, Frn., 108, 44 Roble

Davis, Eli Seeley : Kansas City, Mo., Law sp., 5, Phi Kappa Psi
Davis, Grace Maple : Redwood City, Hist., 42, Redwood City R
Davis, Ida Ellen : Santa Maria, Germ.†, 325 Alma P
[1]Davis, Paul McDonnell : Banning, M. E., 77, Acacia
[2]Davis, Susanna Kirk : San Jose, Bot., 155 Empire, S J, S
Day, Norman Mayfield : San Francisco, E. E., 12, 359 Emerson P
[1]Day, Richard Ellsworth : Sunnyvale, Econ,†, Sunnyvale S
Dean, Arthur Forrest : Corona, Chem., 71, 105 Encina
[1]Dean, Howard Roscoe : Shelton, Neb., M. E., 318 Lytton P
[1]Dean, John Ford : Shelton, Neb., E. E., 318 Lytton P
DeBolt, Thurman Alden : Los Angeles, Law, 43, Kappa Alpha
Delano, Preston Brady : Palo Alto, Law, 100, 155 Encina
[1]Dennis, Horton T. : Tacoma, Wash., Geol., 50, Phi Delta Theta
Derby, Julia : Los Angeles, Germ., 115, Delta Gamma
[1]Derby, William Flagg : East Oakland, Zool. gr., 31 Encina
A. B., Stanford, 1908.

Dernham, Sadie : San Francisco, Hist., 15, 1 Alvarado
[1]Devendorf, Ada : Irwindale, Bot., 121, 3 Madroño
Devine, Kate C. : San Jose, Hist., 23, 52 Post, S J S
Dickey, Helen Janet : Los Angeles, Draw., 29, 6 Roble
Dickinson, Grace : Pasadena, Engl., 1, 1 Alvarado
Dickover, Eva Eleanor : Santa Barbara, Draw., 95, Walden Club
Dickson, Philip West : Los Angeles, Econ., 23, Sigma Nu
[1]Dillon, Isaac : San Francisco, Phyl. gr., 190 Encina
A. B., Stanford, 1908.

[1]Dillon, James Root : San Francisco, Phyl. gr., Acacia
A. B., Stanford, 1908.

Dillon, Josephine : Los Angeles, Frn., 112, Walden Club
Ditz, George Armand : Stockton, Law, 14, 156 Encina
Dixon, Joseph S. : Escondido, Zool. sp., 13, 235 Emerson P
Dixon, Vera : San Jose, Engl., 15, 110 S. 8th, S J, S
Doan, Norman Eugene : Sacramento, Law, 40, S. A. Epsilon
Dodd, Harold Valby : Los Angeles, Geol., 75, 78 Encina
Dodds, Orvis Paul : Mayfield, C. E. sp., 18, Evergreen Park
[1]Doe, Alvah Bartlett : San Francisco, Econ., 5, Beta Theta Pi
[2]Dole, George Ethelbert : Riverside, Econ., 112, Beta Theta Pi
Dole, Kenneth Llewellyn : Riverside, Bot., 12, Beta Theta Pi
Dole, Sanford Ballard : Riverside, E. E., 72, Beta Theta Pi
Donnelly, Jennie Lindsay : Truckee, Grk., 15, 704 Bryant P
Dooner, Clara : Los Angeles, Draw., 106, Manteista

Douglass, Charles York : Mayfield, Chem. gr., Evergreen Park
A. B., Stanford, 1908.
Drew, Arthur Homer : Fresno, Law, 27, Sigma Chi
DuBois, Luther Edwin : Carthage, Ind., Law, 5, 159 Encina
DuBois, Marion Ethel : Alameda, Hist., 53, K. K. Gamma
Dudley, Ernest G. : Stanford Univ., Bot., 101, 222 Kingsley
[1]Dudley, Sarah E. : No Pleasureville, Ky., Engl. gr., College Terrace
A. B., Vassar College, 1897; A. M., Columbia University, 1907.
Duff, Emerson L. : South Pasadena, Law, 13, Kappa Alpha
Duff, Isabel Mary : Menlo Park, Lat., 41, Menlo Park, M
Duff, Marcella Carmelita : Menlo Park, Lat., 15, Menlo Park, M
Duffin, Charles G. : Camas, Wash., E. E., 2, 235 Emerson P
Duffus, Robert Luther : Stanford Univ., Hist., 43, Cedro Cottage
Duffus, William M. : Stanford University, Econ., 39, Cedro Cottage
Dunbar, Everett St. John : Palo Alto, C E., 110, Chi Psi
Dunlap, Carol : Hanford, Lat., 13, 69 Roble
[2]Dunlap, Lillian Susan : Whittier, Engl., 22, Madroño
Dunn, May Alice : Monrovia, Hist., 103, 27 Madroño
Durand, William L., Stanford Univ., E. E. gr., 2 San Juan
A. B., Stanford, 1907.
[2]Duren, Frances Mae : Mayfield, Draw., Mayfield
Duren, Nellie Isabel : Mayfield, Germ., 11, Mayfield, M
Dye, Theodore Cole : Dayton, Ohio, Econ., 13, 8 Alvarado
Dykes, Eldridge Bachman : Mayfield, Educ., 99, Mayfield
[1]Dysart, James : St. Joseph, Mo., Law sp., Acacia
[2]Eames, Alfred Warner : Honolulu, H. T. Law†, 20 Lasuen
Earle, Edna : Los Angeles, Hist., 71, G. Phi Beta
Easler, James M. T. : Los Angeles, M. E., 12, 533 Ramona P
Eastham, Wallis F., Vancouver, Wash., Law, 105, 129 Encina
Eaton, Louis Reginald : San Francisco, Law, 32, Phi Gamma Delta
Eckl, Dora : Los Angeles, Engl., 11, 1 Alvarado
[1]Eckstein, Pearle Marie : Norwalk, Engl. gr., 11 Salvatierra
A. B., Stanford, 1908.
Edmonston, Arthur Donald : Palo Alto, C. E., 39, 545 High, P
[1]Edson, Reta Mary : Palo Alto, Engl., Menalto P
Edwards, Mary Constance : San Jose, Hist., 51, 654 S 8th, S J, S
Ehrenberg, Adele : Alameda, Engl., 14, 37 Roble
Ehrhorn, Adolph Edward : San Fran., E. E., 24, Delta Tau Delta
Ehrnbeck, Anna Julia : Los Angeles, Germ. gr., 526 Forest P
A. B., Stanford, 1908.
Ellerbeck, Aurania : Salt Lake City, U. Engl., 68, Delta Gamma

[1]Elliot, Walter, Jr. : Santa Maria, C. E., 37, Delta Tau Delta
Elliott, John Elbert : Pacific Grove, Geol., 16, 185 Encina
Elliott, Louis Dunshee : Stanford Univ., Chem., 15, 12 Alvarado
Ellis, John Franklin : Ogden, Utah, Chem., 103, 55 Encina
Ellsaesser, Fred : Palo Alto, Engl. sp., 13, 405 Emr'sn P
Elwell, Cyril Frank : Stanford Univ., E. E. gr., 159 Encina
A. B., Stanford, 1907.
Ely, Helen Elizabeth : Phoenix, Ariz. Engl, 16, Delta Gamma
Endres, Anthony : Los Angeles, E E., 44, 567 Lincoln P
Engelhardt, Anne : Oakland, Engl., 7, Madroño
[2]Eto, Yozo : Shizuoka, Japan, Econ. sp., 1125 Ramona
Euans, Kenneth L. : Stanford Univ., Germ.†, 10, 1157 Ramona
Evans, Charles Bordoe : Palo Alto, C. E., 13, Sigma Nu
Evenden, Edward S. : McMinnville, Ore. Math., 15, 718 Bryant P
Fablinger, Vera Brown : Campbell, Germ., 13, 704 Bryant P
Farnsworth, Earle F. : Salt Lake City, U. Econ., 14, Sigma Chi
Farnsworth, Lillian McLaine : Visalia, Hist., 39, K. K. Gamma
Farnsworth, Louis D.: Salt Lake City, U., E. E., 93, Sigma Chi
Farris, Ferne Tryphena : Palo Alto, Econ., 14, 529 Addison P
[1]Faulkner, George C. : San Luis Obispo, Law, 33, 96 Encina
Fay, Lovinia Louise : San Diego, Germ., 32, 58 Roble
[1]Faymonville, Philip Ries : San Francisco, Engl., 75, S. A. Epsilon
Fenton, Kenneth Lucas : Portland, Ore., Law, 99, Kappa Sigma
Feraud, Natalie Bourgeois : Redlands, Engl., 13, 15 Roble
Ferguson, Claude : Bakersfield, Chem., 105, 28 Encina
Ferguson, Harold Gale : Hollywood, Law, 12, D. K. Epsilon
Fergusson, James G. : Stanford Univ., Lat., 98, Delta Upsilon
Ferrell, Gilbert D. : Creal Springs, Ill., Law, 64, 235 Emerson P
Ferry, Douglass Hewitt : San Diego, C. E., 87, 79 Encina
Fetzer, Frank Lockhart : Denver, Colo., Law, 38, Kappa Sigma
Field, Allen Wescott : Lincoln, Neb., Econ., 35, S. A. Epsilon
Field, Bernice : San Jose, Germ., 71, San Jose, S
Field, Lois Edith : Redlands, Grk., 46, 20 Roble
Figg-Hoblyn, Thomas Richard W. F. : Santa Barbara, Phyl., 89, 2 Encina
[2]Finlay, Lester Welling : Los Angeles, C. E. sp., 26, Kappa Alpha
Fisher, George J. : Coyote, C. E.†, 7, 95 Encina
A. B., Santa Clara College, 1907.
Fisher, Marshall Weston : Mayfield, Law, 27, Mayfield M
Fitch, Harold : San Francisco, Hist., 104, 110 Encina

Fitting, John W. : San Bernardino, C. E., 30, 18 Encina
Flanders, Edward Aiken : Stanford Univ., C. E., 108, D. K. Epsilon
Flaus, Italia Evans : Palo Alto, Engl., 77, 911 Scott P
Fleming, Grace Elinor : San Jose, Engl., 75, 43 Roble
Fleming, Robert Charles : San Jose, Law, 15, 10 Alvarado
Flentjen, Auguste C. : Los Angeles, Germ., 53, 564 University P
Fletcher, John Madison : Mountain View, Phil. gr., Mt. View M
A. B., Vanderbilt Univ., 1901; A. M., Univ. of Colorado, 1904.

[1]Fletcher, William Daly : Palo Alto, Geol., 10, 801 Waverly P
Flickinger, Helen : Council Bluffs, Ia., Zool., 51, 39 Roble
Flickinger, Margaret : Council Bluffs, Ia. Germ., 44, 16 Roble
[1]Flinn, Harry : San Francisco, C. E. sp., 4, 515 Waverly P
Flood, Hazel Dolores : Palo Alto, Hist., 61, 521 Everett P
Fobes, Katharine F. : Loomis, Engl., 52, 12 Roble
Foote, Robert Parke : Evanston, Wyo., E. E., 39, 140 Encina
Foote, Victor M. : Modesto, Law, 264 Hamilton P
Forbes, Florence Hazel : Palo Alto, Engl., 80, Gamma Phi Beta
Force, Evelyn Margery : Los Angeles, Engl.†, 12, 63 Roble
Ford, Ernest Leland : Redlands, M. E., 13, Welakahao
Ford, Nellie Elizabeth : Los Gatos, Phyl., 44, 56 Roble
Ford, Robert McFarlin : Los Gatos, Law, 71, 5 Lasuen
Fore, Harry Adolph : Campbell, E. E., College Terrace
[1]Forncrook, Clarence S. : Los Angeles, Grk., 36, 157 Encina
[1]Fosdick, Bertha May : Palo Alto, Math. gr., 339 Kipling P
A. B., Stanford, 1907.

Foshay, Eleanor Anna : Los Angeles, Zool., 77½, Manteista
Foss, James Calvin, Jr. : Palo Alto, C. E., 98, 327 Emerson P
Fowle, Helen Van de Water : San Fran., Engl., 13, K. K. Gamma
Fowler, Alice Belle : Paso Robles, Engl., 45, 329 High P
Fowler, Richard : San Jose, E. E., 146, Welakahao
Frank, Lester Letivitch : San Francisco, Econ., 33, 21 Lasuen
[1]Fraser, James Herbert : San Jose, Chem., 32, 58 Willow, S J
French, Davida C. : Stanford Univ., Hist., 114, Alpha Phi
French, Henry Nelson : San Jose, Law, 110, 119 Encina
French, Jessie Lilla : Pasadena, Engl., 84, 14 Salvatierra
Frolli, Albert William : Salinas, Geol., 75, 145 Encina
Fullaway, David Timmons : Palo Alto, Ent. sp., 131, 235 Emerson P
Fuller, William Parmer, Jr. : San Fran., Law, 58, S. A. Epsilon
Fuqua, Herbert E. : Los Angeles, M.E., 71, Welakahao
[2]Fussell, Edwin Briggs : Palo Alto, Engl., Cardinal Club

Gabel, Alice Hermine : Palo Alto, Germ., 110, 518 Byron P
Gage, Stephen Norris : Oakland, Econ., 33, Zeta Psi
Gale, Helen Avery : Palo Alto, Hist., 72, 928 Waverly P
Galloway, James William : Weiser, Idaho, Law gr., 21 Lasuen
A. B., University of Idaho, 1906.
Gammon, Castle : Lodi, Phyl., 50, La Camaraderie
Gammon, Dell Duane : Lodi, M. E., 51, Theta Delta Chi
Gandolfo, Florence Catherine : Ventura, Germ., 38, 70 Roble
Ganong, Carl F. : Oregon City, Ore., M. E., 36, Theta Delta Chi
Garat, Louis Peter : San Francisco, C. E., 13, Delta Tau Delta
Gardner, Di Margaret : Orange, Law, 111, 2 Salvatierra
Gardner, Walter Hervey : Oroville, Chem., 82, 34 Encina
Garner, Aubrey H. : Astoria, Ore., Geol., 10, College Terrace
Garnett, Benjamin Jay : Stanford Univ., C. E., 41, Stanford Inn
Gatchell, Oscar James : San Diego, C. E., 14, Kappa Sigma
Gay, Leslie Rowell : Redlands, Geol., 114, Beta Theta Pi
Gebb, William Stanley : Jerome, Ariz., Chem., 105, 104 Encina
Geer, Charles Lester : Campbell, Engl. gr., College Terrace
A. B., Stanford, 1907.
Geohegan, Helen : Pasadena, Engl., 10, 38 Roble
George, Florence Ethel : San Diego, Engl., 73, 18 Roble
George, Harry Wescott : Palo Alto, Psy., 73, Cedro Cottage
George, Leslie Nash : Waukegan, Ill., Econ., 13, Phi Kappa Psi
George, Melvin Frederick : Los Angeles, Econ., 56, 23 Encina
Gerard, Bess : Long Beach, Engl., 97, 34 Roble
Gerard, Ruth : Long Beach, Engl., 40, 34 Roble
[1]Gerlach, Percy Adelbert : Los Gatos, Phyl. sp., 78, Los Gatos, L
[2]Gibson, Edward G. : Indianapolis, Ind., C. E., 79, 433 Melville P
Gibson, Flora Edna : Templeton, Lat., 105, 19 Roble
Gibson, Irving Deane : San Francisco, Law gr., 103 Encina
A. B., Stanford, 1907.
[1]Gibson, James A. : Los Angeles, Law, 54, Sigma Nu
Giesy, Paul Church : Portland, Ore., Econ., 27, S. A. Epsilon
Gilbert, Georgiana W. : Chicago, Ill., Engl. gr., K. A. Theta
A. B., Stanford, 1908.
[1]Gilbert, Ruth Hughes : Palo Alto, Hist. gr., G. Phi Beta
A. B., Stanford, 1907.
Gillett, Effie May : Sacramento, Engl., 72, Manteista
Gillett, Ethel Gertrude : Sacramento, Hist., 5, Manteista
Gillmore, Elizabeth M. : Santa Barbara, Hist., 73, 14 Salvatierra
Gilman, Harold Arthur : Redlands, Law, 82, 100 Encina

Gilmer, Harvey Van Epps : Visalia, Econ., 5, 5 Lasuen
Gleason, Daisy Marion : Riverside, Law, 13, 26 Roble
Gleason, Nellie Antoinette : Riverside, Engl., 30, 22 Roble
Glendenning, Roy James : Santa Clara, Law, 58, Ramona P
[1]Goode, Stanley Edward : Denver, Colo., C. E., 6, 10 Alvarado
Goodell, Gorham Lane : Stanford Univ., C. E., 58, S. A. Epsilon
Goodell, James McLain : Mayfield, M. E. sp., 114, College Ter.
Goodspeed, Lillian Mildred : Palo Alto, Lat gr., 329 High P
A. B., Stanford, 1907.
Goold, Herbert S. : San Francisco, Econ., 61, 152 Encina
Gossett, Joseph Orland : Palo Alto, Math., 74, 657 Channing P
Gott, Raymond Arthur : Alameda, Law, 75, Kappa Sigma
Gowan, Arthur Jewell : Los Angeles, E. E., 77, Delta Tau Delta
[2]Graves, LaVergne Gardner : Los Gatos, E. E., 20, 8 Alvarado
Graves, Norine Maureen : Los Angeles, Grk., 39, Gamma Phi Beta
Gray, Mabel Sabrina : Albany, N. Y. Germ., 85, G. Phi Beta
Green, Charles Arthur : San Mateo, Hist., Chi Psi
Green, Harry Carlton : Stanford Univ., Econ., 83, 102 Encina
[2]Green, Helen : Stanford University, Hist., 54, 13 Salvatierra
Green, Kenneth Milton : San Mateo, Econ., Kappa Alpha
Green, Warren Preston : Preston, E. E., 14, 305 Lytton P
Greenwood, Harlow Verne : Vallejo, Educ., 105, 8 Encina
Gregg, Beyrl La Grande : Woodland, Law, 69, College Terrace
[1]Gregory, Benjamin F. : Los Angeles, Spn. sp., 219 Ramona P
Gregory, William Truxtun : Suisun, Econ., 11, Beta Theta Pi
[1]Griffin, George W. : Santa Cruz, C. E., 6, 420 Hamilton P
[1]Griffith, Mary Theresa : San Jose, Engl., 7, 41 Edw'ds, S J, S
Griffith, Thomas B. : Wichita, Kan., Econ., 86, Delta Tau Delta
Grove, Albertina Harriet : Palo Alto, Draw., 40½, 363 Melv'l P
Gruwell, Lewis Earl : Lakeport, Law, 32, 181 Encina
Guerena, Francis Louis : Sonora, Law, 16, Encina
Gundlach, Kent B. : Spokane, Wash., E. E., 9, 20 Encina
[2]Gunnell, Mary E. : Salt Lake City, Utah., Hist., 7 Lasuen
Guy, Frederick Edgar : Columbus, Canada, Geol. gr., Encina
B. A. Sc., University of Toronto, 1901.
[1]Hadden, Georgina Evelyn : Palo Alto, Ent., 68, 1157 Ramona P
Hadley, Earl Jonathan: Bellingham, Wash. Engl., 105, Kappa Sigma
Hadley, Howard Irving : Santa Barbara, Law, 34, 10 Alvarado
Hadley, Mildred Monroe : Whittier, Germ., 74, Pi Beta Phi
Hagan, Hugh Lawrence : Berkeley, Law gr., Mayfield
B. L., University of California, 1906.

[2]Haig, Florence Bertha : San Gabriel, Math., 36 Roble
Hails, Charles Hamilton : Santa Barbara, Law, 44, 132 Encina
Halcombe, Norman Marshall : San Fran., C E. sp., 50, 92 Encina
[2]Hale, Frederic A., Jr. : Salt Lake City, U., Geol., 62, Chi Psi
[2]Haley, Percis Coons : Palo Alto, Educ. sp., 40, 768 Bryant P
Hall, Katherine M. H. : San Jose, Educ., 75, 189 S 11th, S J, S
Hall, Mortimer Louis : Pasadena, Chem., 12, 183 Encina
Haller, George Francis : San Francisco, E E., 26, 3001 J'ksn, S F, S
Halliday, Thomas W. : Spokane, Wash., Geol., 41, Phi Delta Theta
Halloran, Edwin Francis : San Diego, Geol., 53, Kappa Alpha
Halloran, Lewis Fred : San Francisco, M. E., 110, 58 Encina
Halsey, Gerald C. : Woodside, Law, 104, Redwood R
Halsey, Mildred : Woodside, Germ., 110, Redwood R
Halsey, Stella Duffield : Honolulu, H. T. Bot., 75, 52 Roble
Hamashima, Misao : San Jose, Econ. sp., 11, Japanese Club
Hamilton, Arthur Elton : Pasadena, Law, 9, 8 Alvarado
Hamilton, Archibald McD. : Palo Alto, Law, 96, 59 Encina
Hammond, Karoline Silliman : San Diego. Lat. gr., K. A. Theta
A. B., Stanford, 1908.
[1]Hampton, Chilton : Palo Alto, Psy. gr., 707 Bryant P
A. B., Stanford, 1908.
[2]Hancock, Joseph Edward : San Jose, Educ., 532 S 9th, S J, S
Hanley, Katharine Gertrude : Pasadena, Hist., 13, 8 Madroño
Hanna, Cornelia Alberta : Redlands, Engl., 30, K. A. Theta
[1]Hanns, William Harrison : Palo Alto, Engl.†, 4, 768 Bryant P
Hansen, Edna Marie : San Mateo, Lat. gr., San Mateo S
A. B., Stanford, 1908.
Hanswirth, Frieda M. : Bern, Switzerland, Germ., 13, 176 Bryant
Happy, Cyrus Prickett : Spokane, Wash., Law, 39, P. D. Theta
Harbaugh, Ross Wallace : Palo Alto, Chem., 90, D. T. Delta
Hardison, Hope : Santa Paula, Zool., 10, 2 Roble
Hardy, Georgie Saunders : San Diego, Draw., 29, 5 Roble
[2]Harle, Hugh Coffin : New York, N. Y., Econ. †, S. A. Epsilon
Harris, Margaret Eleanor : Stanford Univ., Engl., 36, 14 Salvatierra
Harris, Miriam Alice : Santa Clara, Hist., 63, K. K. Gamma
Harris, Walter J. : Pasadena, C. E.†, 13, Evergreen Park
Hart, Lowell Jay : Palo Alto, Econ., 28, Theta Delta Chi
[1]Harrison, Hurst Perbasco : Palo Alto, Law, 23, 724 Bryant P
[1]Haskell, Edward Eben : Pasadena, C. E., 76, Kappa Sigma
Haskett, Don Stanley : Pasadena, Econ., 67, 45 Encina
Hastings, Russell P. : Soncy, Bermuda I., C. E., 98, Chi Psi

[2]Hatch ,Geraldine Viola : San Jose, Fren., Alpha Phi
Hatch, Homer J. : Paso Robles, M. E., 37, 31 Encina
Hatfield, George Juan : Oakland, Law, 9, 16 Salvatierra
Haver, Harold McCuller : Redlands, E. E., 84, D. K. Epsilon
[2]Hawes, Ben Merrill : Santa Cruz, Geol., University Hotel P
[1]Hawkins, Bellwood C. : Woodland, Psych.†, 405 Emerson
Haworth, Forest L. : Mayfield, Law, 5, Mayfield M
[2]Haxo, Henry : San Francisco, Frn. sp., 232 Lytton P
Hayden, Edith : Fresno, Germ., 43, Madroña
Hayden, Mary Calvert : Tempe, Ariz., Engl., 75 Manteista
[1]Hayes, Anson Clinton : Edenvale, Law, 6, Encina
Hayes, Harriet : Palo Alto, Engl., 80, 445 Forest P
Hayes, Mildred Mary : Edenvale, Engl., 13, G. P. Beta
Hayes, Pauline Elizabeth : Alameda, Fren., 40, 22 Lasuen
Haynes, Walter : Palo Alto, E. E. gr., 205 Ramona P
A. B., Stanford, 1908.

Hayslip, Eva Lois : Sunnyvale, Engl., 104, 653 S. 11, S J. S
Hayward, Edna : San Carlos, Germ., 46, San Carlos S
Hazeltine, Katherine S. : San Jose, Engl., 88, 928 Waverly P
Hazen, Coralyn : Modesto, Germ., 108, 12 Madroña
Heald, Elmer Wilson : Palo Alto, Geol., 13, 558 Hawthorne P
Heartt, Jennie Alice : Los Angeles, Engl., 11, G. P. Beta
[1]Heath, Ernest Robert : Enterprise, Ind., Chem.†, 1147 Ramona P
B. S., Moore's Hill College, 1906.

Heber, Bernice Estelle : Los Angeles, Engl., 15, 37 Roble
Heche, Arthur : Pomona, Educ., 44, College Terrace
Hedum, Marie Otillie : Wallace, Id., Lat., 107, 549 Cowper P
Heflinger, Grace Katherine : Pasadena, Math., 12, 9 Salvatierra
Heffron, Harold Johnson : Los Angeles, C. E., 106, P. D. Theta
Heinly, Donald George : Los Angeles, Law, 55, Sigma Nu
Hellmann, Joseph A. H. : Redwood, Law, 48, Redwood City R
Hellmann, Richard Hoge : Redwood, Law, 8, Redwood City R
Helmick, Milton John, Denver, Colo., Law, 22, S. A. Epsilon
Helsley, Gordon Friedrich : Ceres, Econ., 16, 166 Univ. Ave. P
Hemphill, John Parks : Calistoga, Econ., 75, 43 Encina
[2]Henley, Lloyd A. : Mayfield, E. E., 72, Evergreen Park
[1]Henley, Victor H. : Mayfield, E. E., Mayfield M
Henry, Joe Edson : San Jose, Econ., 32, Zeta Psi
[1]Henry, Mary Kate : San Jose, Hist., 326 N S. Fern. S J, S
Henry, Thomas Cecil : Los Angeles, Econ., 33, D. K. Epsilon

Herbert, Elmer Harlan : San Jose,	M. E., 96,	Manzanita
Herold, Stanley Carrollton : San Jose,	Geol, 97,	Acacia
[2]Herre, Albert Christian : Los Gatos,	Bot. gr.,	Los Gatos L
A. B., Stanford, 1904; A. M., 1905.		
Herrmann, Frank Adolph : San Jose,	C E. sp., 87,	Acacia
Herron, Frederick William : Napa,	C. E., 110,	438 Bryant P
Hershiser, Beulah : Reno, Nev.,	Hist. gr.,	16 Alvarado
A. B., University of Nevada, 1906.		
Hertel, Elmer Louis : Pasadena,	Hist., 7,	Zeta Psi
Hess, Harry Lee : Baltimore, Md.,	M. E., 44,	160 Encina
Hess, John Strider : Baltimore, Md.,	C. E., 69,	79 Encina
[2]Hesse, Lena Juanita : Tulare,	Germ.,	15 Madroño
Hettman, Frederick Jacob : Palo Alto,	F. E., 90,	194 Encina
Hettman, Walter Emil : Rocklyn, Wash.,	Law, 45,	194 Encina
Hickin, Vance : Rittman, O.,	Chem., 72,	405 Kipling P
[2]Hicks, William Wesley : San Francisco,	E. E. sp., 6,	359 19th, S F, S
Higgins, James Edwin Jr. : Alameda,	Econ., 8,	Kappa Sigma
Higgins, Winifred : Astoria, Ore.,	Hist., 28,	G. P. Beta
High, Helen Elisabeth : Pasadena,	Phys., 11,	65 Roble
[2]Higley, Rose Miriam : Pasadena,	Zool. gr.,	10 Madroño
A. B., Stanford, 1907.		
Higley, Wynter Blain : Pasadena,	Geol. sp., 110,	55 Encina
Hilby, Francis Bernard : Monterey,	E. E., 15,	333 Waverly
Hill, Ella Naomi : Redlands,	Hist., 108,	Delta Gamma
Hill, Frank Ernest : San Jose,	Engl., 11,	Stanford Inn
[1]Hill, Frank Lloyd : Emlenton, Pa.,	Law gr.,	350 Emerson P
A. B., Stanford, 1908.		
Hill, Henrie Granville : San Jose,	Law, 74,	715 W Julian, SJ, S
[1]Hill, John James : Riverside,	Law, 94,	68 Encina
Hill, Laurance Landreth : Los Angeles,	Econ., 11,	105 Encina
Hill, Mary Guyer : Hemet,	Engl., 42,	Delta Gamma
Hill, Roland Varian : Pasadena,	C E., 14,	102 Encina
Hill, Walter Hamilton : Hemet,	Chem., 106,	Delta Tau Delta
[1]Hillyard, Sydney : Mayfield,	Engl. sp., 4,	Cardinal Club
Hilton, Frank Howard : San Diego,	Law, 12,	65 Encina
[1]Hind, Robert Renton : San Francisco,	M. E., 30,	118 Encina
[2]Hine, Harry Adams : Eureka,	[1]C. E., 14,	130 Encina
Hine, Thomas Buck : Eureka,	Chem., 49,	130 Encina
Hislop, Elizabeth : Chicago, Ill.,	Engl., 106,	Delta Gamma
[1]Hiyama, Zenjiro : San Francisco,	F. E., 5,	208 University P
[1]Hoagland, Dennis Robert : Denver, Colo.,	Chem. gr.,	160 Encina
A. B., Stanford, 1907.		

[1]Hodgdon, Emma Florette : Sacramento, Frn. gr., Alpha Phi
A. B., Stanford, 1908.
Hodge, Raymond Earl : Rialto, Law, 100, 97 Encina
Hoff, Eva : San Diego, Germ., 44, 47 Roble
Holbrook, Lettie DeV., Portland, Ore., Hist., 26, 324 Emerson P
Holcomb, Eliot : Portland, Ore., Law, 4, S. A. Epsilon
Holcomb, Fred Leroy : Banning, Draw., 77, 405 Emerson P
Holcomb, Grant : San Bernardino, Law, 10, 183 Encina
Hollensteiner, Arno Gerald : Palo Alto, Engl., 13, 318 Emerson P
Hollmann, Emil Frederick : Pasadena, Math., 11, Cardinal Club
Holly, Jesse Blaine : Dixon, C. E., 120, 81 Encina
Holman, John Raymond : Portland, Ore., E. E., 59, Zeta Psi
[1]Holman, Richard Morris : Palo Alto, Bot. gr., Lotus Club
A. B., Stanford, 1907.
Holmes, Winn Earl : Wichita, Kans., Law, 41, Delta Tau Delta
Hook, Joseph Stanley : Perris, Geol., 37, Encina
[1]Hooker, Mabel Amelia : Somis, Engl., 15, 16 Alvarado
Hoover, Bessie Belle : Palo Alto, Engl., 87, 321 Melville P
Hopper, Shirley Marie : Fresno, Germ. gr., 426 S. 7th, S J, S
A. B., Stanford, 1907.
Hori, Ayao : Vallejo, E. E., 84, Japanese Club
Horn, Pearl Myrtle : Oakland, Math., 101, 5 Madroño
Horner, Edgell : Detroit, Mich., Engl., Phi Kappa Psi
Horton, Marion Louise : Pasadena, Engl., 11, 46 Roble
Horton, Harry Leonard : Ukiah, C. E., 57, 178 Encina
Hoskinson, Carl McKee : Sacramento, E. E., 75, 173 Encina
Houghland, Janet Berry : Palo Alto, Hist., 84, 14 Roble
Houser, John David : Sacramento, Engl., 35, 157 Encina
Howell, Lucy Elizabeth : Los Angeles, Grk., 104, Delta Gamma
Howell, Maude Teresa : Los Angeles, Hist., 35, Delta Gamma
[1]Hudson, Robert Henry : Watsonville, Law, 112, 104 Encina
[1]Huffman, Mercedes : San Francisco, Hist., 71, Alpha Phi
Hughes, Arthur D. : Downer's Grove, Ill., Geol., 113, 131 Encina
Hughes, Jennie Sherwood : Berkeley, Draw., 46, 44 Roble
Hughes, Ralph Leon : Salinas, C. E., 42, 154 Encina
Hughson, Beth : Sacramento, Grk., 112, K. K. Gamma
[2]Hulburt, George Perry : Hollywood, E. E., 515 Waverly P
Hull, Delia Mae : Palo Alto, Lat., 104, 427 Homer P
Hulsman, Evelyn Clara : Susanville, Engl., 11, 611 Bryant P
Humphrey, Harry Frank : Santa Ana, Geol., 13, Welakahao
[2]Hunter, Hubert Samuel : Phœnix, Ariz., Lat., 84, 11 Encina

Hunter, Sue Marshall : Los Angeles, Hist., 14, 41 Roble
Huntsberger, Adele Clare : Los Angeles, Hist., 24, Pi Beta Phi
Huntsberger, Maude Ethel : Los Angeles, Lat., 102, Delta Gamma
Huntsberger, Ralph F. : Los Angeles, Hist., 97, 66 Encina
Hussey, George Donald : Los Angeles, Econ., 25, Kappa Alpha
[1]Huston, Jay Calvin : Palo Alto, Law, 27, Fire House
Hutchins, Alice Agnes : Stanford Univ., Hist., 110, Pine Cottage
Hutchins, Mary Emeline : Stanford Univ., Hist., 93, Pine Cottage
Hutchinson, Harry T. : Huron, S. Dak., Law, 86, 77 Encina
Hyatt, Edward, Jr. : Sacramento, C.E., 48, 88 Encina
Hyatt, Marguerite : Sacramento, Zool., 107, 45 Roble
[2]Hyatt, Shirley : Sacramento, Phys. gr, Roble
A. B., Stanford, 1906.
Ichihashi, Yamato : Palo Alto, Econ. gr., 656 Channing P
A. B., Stanford, 1907.
Ingels, Effie Merle : Fresno, Bot., 106, 42 Roble
Jackson, Edward Royle : Redding, Law gr., 10 Alvarado
A. B., Stanford, 1906.
Jackson, Frank Kennedy : Berkeley, Law., 63, 8 Alvarado
[1]Jackson, Hartley Everett : Palo Alto, M. E., 27, 1028 Bryant P
Jacobi, Aaron Leonard : San Francisco, Law, 5, 8 Alvarado
[1]James, Grace Louise : Santa Monica, Hist. gr., 25 Roble
A. B., Stanford, 1907.
James, Joseph P. : Berkeley, Chem., 13, Forest & Wave'ly
[2]James, Myrtle Hodge : Santa Monica, Germ., 36, 25 Roble
Jameson, Eloise : Corona, Chem., 42, 59 Roble
Jameson, Joy Gilbert : Corona, Geol., 130, 36 Encina
Jarman, Edith Louise : San Jose, Hist. gr., San Jose, S
A. B., Stanford, 1907.
[1]Jeffreys, Anna Ernestine : Princeton, Phyl., 38, 39 Roble
Jenanyan, Samuel Stephen : Orosi, Chem.†, 9, 37 Encina
Jennison, Marjorie : Fitchburg, Mass., Hist., 53, Delta Gamma
[1]Jens, Anna Margaret : Belmont, Germ., 19, Belmont B
[2]Jensen, Dagmar Christence : Los Angeles, Math., gr., Madroño
A. B., University of Minnesota, 1904.
Jerman, Olive Anna : Ramona, Engl., 16 Alvarado
Jesson, Robert Harold : Ontario, C. E., 12, 91 Encina
Jewett, Inez Darrell : Fresno, Germ., 15, Pi Beta Phi
Joachim, Arthur : Campbell, C. E., 12, College Terrace
[1]Johnson, Albert Lawrence : Oakland, Law, 63, 183 Encina
[1]Johnson, Clark Cyrus : Los Angeles, C. E., 79, 139 Encina

Johnson, Carrie Jette : Pacific Grove, Hist., 10, 68 Roble
Johnson, Emily B. : Los Angeles, Hist., 39, K. K. Gamma
[1]Johnson, James Rowland : San Jose, E. E., 51, 105 Encina
Johnson, Johanne Tollefine : San Jose, Phyl., 42, 331 Lincoln P
Johnson, Newton Alexander, Jr.: Fresno, Law, 101, D. K. Epsilon
[1]Johnson, Philip Royal : Los Angeles, Econ., 60, Zeta Psi
Johnson, William : Mountain View, Chem., Mountain View M
Johnson, William S. : Stanford Univ., E. E. sp., 134, 76 Encina
Johnston, Angus, Jr. : Colton, Econ., 24, College Terrace
[1]Johnston, Carl Edward : Santa Cruz, Econ., 8, Kappa Alpha
Johnston, Hazel May : Santa Clara, Hist., 37, Alpha Phi
Johnston, Robert Morris : Butte, Mont., C. E., 30, 71 Encina
[1]Jones, Gilbert Russell : Suisun, M. E., 141 Encina
Jones, Kenneth Inskip : Suisun, Law, 63, 141 Encina
Jones, Robert Alton : Burlington, Vt., Chem., 103, 117 Encina
[2]Jordan, Edward : Brisbane, Australia, Phys., gr., 4 Alvarado
B. S., University of Sydney, 1901.
Jordan, Knight Starr : Stanford Univ., Geol., 37, Xazmin House
Jordan, Walter Lyle : Los Angeles, Chem., 29, Encina
Jorgensen, Henry Garfield : Palo Alto, Law, gr., 618 Fulton P
A. B., Stanford, 1907.
Jourdin, Willis Wallace : Stanford Univ., M. E. sp., 134, 53 Encina
Junge, George Edward : Osmond, Neb., Law†, 12, 305 Melville P
Kallmeyer, Paul : El Monte, Hist. sp., 7, College Terrace
Katakura, Tojiro : Osaki, Japan, Econ. sp. 67, Japanese Club
Kauffman, Florence : Pomona, Engl., 77, 2 Salvatierra
Kauffman, Marguerite Edna : Pomona, Hist., 42, 2 Salvatierra
Kawara, Masaki : San Francisco, E. E. gr., 656 Channing
A. B., Stanford, 1908.
[1]Kawashima, Umekichi : Shigaken, Japan, Phys. sp., 21, 5 Salvatierra
Kay, David Nelson : Sacramento, Geol., 47, 629 Emerson P
Keatinge, Annie Harriet : Palo Alto, Chem., 10, 111 Bryant P
Keech, Helen Jeannette : Santa Ana, Bot., 76, 2 Salvatierra
[2]Keesling, Hector : San Jose, E. E., 41, Sigma Nu
Keesling, Homer Grant : San Jose, E. E., 82, Acacia
Keller, Norma Grace : Almira, Wash., Math., 39, 27 Madroño
Kelley, Charlotte Jane : Redlands, Hist., 104, 17 Madroño
Kellogg, Rollo Morton : Fallbrook, C. E., 12, College Terrace
Kellogg, Roy Seldon : Pasadena, Chem., 90, Delta Upsilon
Kelly, Thomas Henry : Winnipeg, Canada, Econ.†, 11, 158 Encina
Kemp, Belle : Denver, Colo., Draw., 102, 251 Emerson P

Kennard, Ada Marie : Redlands, Draw., 9. La Camaraderie
Kennicott, Anna T. : Westcliffe, Colo., Chem., 77. 14 Salvatierra
[1]Kercheval, Elbert Merwin : Sacramento. C. E., 19. Sigma Nu
Killian, Joseph Adolf : Los Angeles, C. E. sp., 14. S. A. Epsilon
King, Dean : Kalispell, Mont., Geol., 46. 318 Emerson P
[2]King, Harriet Shulze : Banning, Phyl., 30. 20 Roble
Kinley, Fielden : Santa Rosa, E. E., 107. 56 Encina
Kirk, Mabel Louise : Los Angeles, Draw., 41. 16 Alvarado
Kirkwood, Marion Rice : Mountain View, Law, 67. Delta Upsilon
Kistler, Jessie Rua : Covina, Engl., 16, 635 Bryant P
Klauber, Lawrence Monroe : San Diego, E. E., 125. 120 Encina
Klein, George M. : Mountain View, M. E., 103. 344 Emerson P
Knapp, Bertha Jane : Tehachipi, Germ., 84. Walden Club
Knight, Harold Pratt : Pasadena, Chem., 12. P. G. Delta
Knipe, Olive : Palo Alto, Engl., 107, 1011 Fulton P
Knollin, Herbert Edward : Palo Alto, C. E., 37. 621 Gilman P
Knox, Marguerite Regina : Los Angeles, Grk., 12. Walden Club
Knowles, Paul Valerian : San Francisco, Lat., 103. 2873 F'lsm. S F. S
[1]Knupp, Guy : Porterville, Law gr., 80 Encina
A. B., Stanford, 1907.
Kobbe, Eric : Pasadena, Math., 1, Beta Theta Pi
Kocher, Alfred Lawrence : San Jose. Hist., 74. 99 Morrison, S J
Kocher, Edwin Howard : San Jose. Hist., 11. 99 Morrison, S J
Kocher, Rudolph Alfred : San Jose. Phyl., 110. 99 Morrison, S J
Koehler, Charles C. : Tacoma, Wash., Econ., 38. Delta Tau Delta
Koerner, William : Oregon City, Ore., Geol., 115. Kappa Sigma
Konno, Rokuro Goto : Palo Alto, Law, 16. 656 Channing P
Koontz, John Andrew, Jr. : Palo Alto, E. E., 105. 221 Bryant P
Kramm, Hugo Edmund : Palo Alto, M. E., 73. 533 Ramona P
Kughen, Flora Elizabeth : Los Angeles, Hist., 95. 16 Alvarado
Kuhnert, Walter Andrew : San Francisco, Chem., 6. 535 Byron P
[2]Lacey, Gladys Vivien : Salinas, Lat., Roble
[1]Lacey, Rowland Sherman : San Diego, Hist. gr., 119 Encina
A. B., Stanford, 1908.
Lacey, William Noble : San Diego, Chem., 16, 70 Encina
LaGrange, George Erwin : Hollywood, Law, 15, 1048 Ramona P
Lake, Jarrett Townsend : Redlands, E. E., 8, 549 Cowper P
Lakin, Egerton Drew : Palo Alto, Law, 104, 483 Addison P
Lambert, Elamae : Woodland, Engl. gr., Pi Beta Phi
A. B., Stanford, 1907.
Lanagan, Frederic Rodgers : Palo Alto, Law, 102, 640 Waverly P

[1]Lanagan, James Francis : Palo Alto, Law gr., 374 Kingsley P
A. B., Stanford, 1900.
Landon, Maude Juanita : Los Gatos, Bot., 13, Madroño
Landon, William Emerson : Pasadena, C. E., 42, 122 Encina
[1]Lane, Charles Alfred : Chula Vista, Law†, 359 Emerson P
Lane, Rilla Grafton : La Canada, Engl. gr., 281 Hawthorne P
Ph. B., Drake University, 1898.
[1]Langstroth, Francis Blackburn : Oakland, Geol. sp., 92, Zeta Psi
Langstroth, Lovell : Oakland, Chem., 100, Zeta Psi
Lanktree, Elizabeth Frances : Alameda, Engl., 24, 14 Salvatierra
Large, John Henry : Palo Alto, Law, 46, 1101 Cowper P
Large, Shelby LaVerne : Palo Alto, Law, 70, 1101 Cowper P
Large, Zelma Ria : Palo Alto, Engl., 70, 1101 Cowper P
[1]Lashlee, Ralph Albert : Redlands, E. E., 22, 177 Encina
Lawson, Edith : Sacramento, Engl., 45, Manteista
[2]Leach, Charles Nelson : Stanford Univ., Chem., 69, 82 Encina
Leaf, Erle Mervin : San Jose, Law, 33, 370 N 5th, S J, S
[1]LeBert, Eugene Richard : Denver, Colo., Law†, 651 Gilman P
LeCount, Clarence Milton : Clark, S. Dak., E. E., 12, Welakahao
Lee, Bradner Wells, Jr. : Los Angeles, Law, 10, D. K. Epsilon
Leeds, Jacob Howard : San Diego, E. E., 14, Kappa Alpha
Legge, Frances Lynette : Pasadena, Engl., 11, K. Alpha Theta
Leib, Earl Warren : San Jose, Geol., 9, Zeta Psi
[1]Leib, Roy Chilton : San Jose, Geol. gr., Zeta Psi
A. B. Stanford, 1904.
Lemmon, Dal Millington : Santa Rosa, Law, 107, Kappa Alpha
Lenfest, Blossom Edith : Los Gatos, Hist., 40, 426 Florence P
Lenfest, Calvin Ray : Los Gatos, Econ., 10, 426 Florence P
Leonard, Florence A. : San Bernardino, Bot., 62, 54 Roble
Levy, Joe Paul : Hueneme, Econ., 25, 151 Encina
[1]Levy, Leo Samuel : San Francisco, Engl., 82, 202 Encina
Lewis, Ervin Eugene : San Jose, Educ. gr., 396 S 2d, S J, S
A. B., Stanford, 1907.
[1]Lewis, Helen Annette : Palo Alto, Bot., 23, 411 Waverly P
Lewis, James Ogier : Pacific Grove, Geol., 53, 185 Encina
Lewis, Ruth Elizabeth : San Francisco, Grk., 81, Pi Beta Phi
Lilienthal, Jesse W., Jr. : San Francisco, Hist., 96, 16 Salvatierra
Lilienthal, Philip N., Jr., San Francisco, Hist., 13, 16 Salvatierra
Lindauer, Samson Arthur: Deming N.M., Law, 63, 82 Encina
[1]Lingerman, Birdeena L. : Tacoma, Wash., Engl.†, 16 Alvarado
[1]Lipscombe, Maude May : Saratoga, Lat. gr., Manteista
A. B., Stanford, 1907.

Little, John Elwin : Whittier, Geol., 11, Phi Kappa Psi
Little, Marjorie Hadley : Whittier, Lat., 104, Pi Beta Phi
Little, Robbins : Pasadena, Geol., 29, Beta Theta Pi
Lockwood, Lillian Lottie : Los Angeles, Hist.†, 16, 55 Roble
[1]Loeser, Katherine F. : Stanford Univ., Chem. gr., 21 Salvatierra
A. B., Stanford, 1908.
Long, Albert Regan : San Pedro, M. E. sp., 11, 861 Ramona P
Long, Burton Earle : Glendora, Chem., 87, Welakahao
Long, Royce Reed : Palo Alto, Phyl. sp., 116, Chan'g Lane
Lord, Wilma Grace : Palo Alto, Zool. gr., 526 Waverly P
A. B., Stanford, 1907.
Losse, Etheridge Mills : San Jose, Econ., 15, Phi Kappa Psi
[2]Loughborough ,William B.: San Francisco, Enlg. sp., 25, P. G. Delta
[1]Louis, Gilbert Ernest : Riverside, Geol., 32, 18 Encina
Low, Isabel Tura : Green Mountain, Ia., Germ., 33, 261 Homer P
Lowrie, Harold W., Jr. : Denver, Colo., Chem., 8, Beta Theta Pi
Luchsinger, Albert G. : San Francisco, Econ., 63, S. A. Epsilon
Ludwig, Ethel R. : Palo Alto, Engl., 101, 441 Emerson P
Luhrs, Arthur Cleveland : Phoenix, Ariz., Geol., 117, 68 Encina
Luke, Amy Genevieve : Palo Alto, Engl., 110, 430 Kipling P
[2]Lynn, Charles Mathew : San Jose, C. E., 87 N. Priest, S J, S
[2]Lyons, Willard Everet : Los Angeles, Law, 104, Chi Psi
McAlister, James Wm., Jr. : Los Angeles, Law, 9, Encina
McAllister, Stella : Sacramento, Hist., 69, 67 Roble
McCann, Eugene Garrison : Los Angeles, E. E., 43, 44 Encina
McCann, Robert James : Pacific Grove, Geol. sp., 13, 227 Bryant P
McClelland, Ruth Elizabeth : Palo Alto, Hist., 69, 437 Webster P
[1]McCollough, Vernon Clare : Los Angeles, Law, 53, 45 Encina
McConnell, Walter H. : Los Angeles, Law, 11, Delta Upsilon
MacCormac, Margaret E., Palo Alto, Grk., 104, 750 Bryant P
McCowen, Hale, Jr. : Ukiah, Law, 58, Encina
[1]McCracken, Mary Isabel : Stanford Univ., Ent. gr., 14 Alvarado
A. B., Stanford, 1904; A. M., 1905; Ph. D., 1908.
McDaniel, George William : Eureka, Geol., 127, 104 Encina
[2]Macdonald, Alexander S. : Portland, Ore., C. E, 15, 116 Encina
McDonald, James Owens : Compton, E. E., 70, 184 Encina
[1]McDonogh, Rhode Audrea : Burlingame, Engl., 10, 1 Alvarado
[1]McDougal, Latham Eastman : Belmont, C. E., Belmont B
McDuffie, William C. : Santa Barbara, Econ., 19, Phi Delta Theta
McElroy, Robert W. : San Francisco, Law, 72, 155 Encina
McEwen, George Francis : San Diego, Phys., 118, 640 Homer P

McFadden, Robert Clyde : Palo Alto, E. E., 47, 454 Forest P
[2]MacFarland, Olive Hornbrook : Palo Alto, Phyl gr., 943 Scott P
B. L., Ohio Wesleyan Univ., 1893; A. B., Stanford, 1906.
McGeorge, Edith : Eureka, Germ. gr., Manteista
A. B., Stanford, 1907.
McGilvray, Walter S. : Stanford Univ., Hist., 36, Escondite
[1]McGlashan, Earl Leo : Truckee, Law†, 16, 56 Encina
McGovern, Anna Louise : Palo Alto, Hist., 71, 651 Channing P
McGregor, Ernest A. : Stanford Univ., Zool. 106, Schnell Cottage
McGregor, Gregor : Benicia, C. E., 60, 75 Encina
McGuire, John Perry : Stanford Univ., E. E., 50, 128 Encina
McIntosh, George Wade : Mentone, C. E. sp., 71, S. A Epsilon
McKay, Cecil Curtis : Palo Alto, M.E., 102, 557 Hamilton P
[2]McKee, Abigail Frances : San Jose, Engl., 30, 16 Alvarado
McKee, Bessie Willoughby : Palo Alto, Germ, 62, 628 Waverly P
McKell, William Scott : Chillicothe, O., Phyl., 105, 724 Bryant P
McKenzie, Kenneth Stuart : Santa Rosa, Law, 35, 190 Encina
McKeown, Edward Lawrence : Gilroy, Law, 9, Welakahao
Mackey, Lorrain Banks : Los Angeles, Law, 30, Beta Theta Pi
McKinley, Sara Fay : Anaheim, Germ., 77, Manteista
McLachlan, Anita Jean : Pasadena, Hist., 12, K. K. Gamma
McLain, George Brundage : Los Angeles, Geol., 49, Zeta Psi
Macmillan, Alfred : Berkeley, Law, 35, 140 Encina
McMillan, W. Bruce : San Jose, C. E., 17, 353 S 11, S J, S
McMillan, Cora Lilo : Browns Valley, Educ., 44, 45 Roble
McMurphy, James I. W. : Stanford Univ., Bot. sp., 137, Schnell House
McNulty, Frederick William : Fortuna, Law†, 5, Theta Delta Chi
Macomber, Frank J., Jr. : Los Angeles, Law, 48, Kappa Sigma
Macomber, Lawrence Osgood : Pasadena, Law, 32, Phi Delta Theta
McPheeters, George Carl : Palo Alto, Grk., 42, 836 Waverly P
Macpherson, Dorothea : Palo Alto, Engl., 68, Alpha Phi
[1]Macpherson, William Fordyce : Palo Alto, Geol., Kappa Alpha
Macready, George A. : Los Angeles, Geol., 47, 44 Encina
Macrum, Garfield H. : Portland, Ore., C. E.†, 6, Theta Delta Chi
[1]McWethy, Jesse Robert : Rialto, C. E., 23, 166 Encina
McWethy, LeRoy : Rialto, C. E., 63, 169 Encina
Maddox, Hazel Claire : Visalia, Zool., 67, K. K. Gamma
Maddox, Ruth Evalina : Visalia, Germ., 34, K. K. Gamma
Mahone, Francis D. : Honolulu, H. T., E. E., 49, Kappa Sigma
Maine, Beatrice M. : Riverside, Germ., 89, 26 Roble

[1]Malloy, Joseph Drumm : San Jose, Law, 56, San Jose
Malloy, Minnie F. : Walla Walla, Wash., Engl., 67, 16 Alvarado
Malone, Maurice Young : Laton, Law, 43, 166 Encina
[2]Maltaner, Frank : Cincinnati, O., Chem., 5 Lasuen
[2]Manabe, Yoshiro : Tadotsu, Japan, Zool. sp., 55, Japanese Club
[2]Mann, Horace : San Carlos, Geol., 35, San Carlos S
[2]Mann, Leland S. : Arroyo Grande, Law, College Terrace
Marceau, Daniel Victor : Lockeford, Law, 103, 121 Encina
Marchant, Clyde Coad : Tustin, Chem., 41, 144 Encina
Marshall, Hugh Gibson : Monrovia, C. E., 79, 33 Encina
Marshall, Ivey : Los Angeles, Law†, 2, 54 Encina
[1]Marshall, James William : Los Angeles, Geol. sp., 4, College Ter.
Marshall, Margaret : Deputy, Ind., Psy., 55, 16 Alvarado
[1]Marshall, Ralph Kerr : Phoenix, Ariz., Law, 55, 54 Encina
[2]Martin, Alden Karl : Reno, Nevada, Law, 5, Beta Theta Pi
Martin, David G. : So. San Francisco, Econ., 24, S. A. Epsilon
Martin, George Everett : Dixon, C. E., 31, 95 Encina
Marx, Dorothy Grotecloss : Palo Alto, Engl., 13, 357 Kingsley P
Marx, Roland Grotecloss : Palo Alto, C. E., 14, 357 Kingsley P
Mason, Charles William : San Francisco, Hist., 31, 139 Encina
Masters, William Henry : Portland, Ore., Law, 71, 127 Encina
Matchette, Orral : Palo Alto, Engl., 102, 535 Waverly P
Matchette, Paul Lenoir : Palo Alto, Phyl., 8, 949 Emerson P
Mathewson, Arthur Adelbert : Coronado, Geol., 108, Phi Kappa Psi
Mathiason, Gertrude Karen : Los Angeles, Engl., 83, 23 Roble
[2]Matsuda, Frank Moritaro : San Francisco, E. E. sp., 656 Channing P
[2]Matsuoka, Shigezo : Oakland, Math. sp., Japanese Club
Matthias, Edwin Clark : Spokane, Wash., Engl., 11, Phi Kappa Psi
Mattes, Lewis Yarde : Corning, Geol. sp., 41, Sigma Nu
[1]Mattingly, Gladys Marie : San Francisco, Draw., 42, 2 Salvatierra
[1]deMattos, Augustine E. : Watsonville, Law, 117, 104 Encina
Maundrell, Harold Hugh : San Francisco, Econ., S. A. Epsilon
Mayers, Frank Bernard : Reno, Nevada, Law, 70, Kappa Alpha
Mealey, William Perry : Compton, Law, 82, 184 Encina
Meddick, Thomas Devereaux: Ovid, N.Y., E. E., 11, 190 Encina
Melczer, Edward A. : Phoenix, Ariz., Geol., 38, 192 Encina
Melczer, Isadore : Phoenix, Ariz., Law, 104, 192 Encina
Menardi, Harold Blair : Reno, Nevada, Chem., 96, 110 Encina
Menke, John Henry, Jr. : Salinas, Geol., 41, 145 Encina
Meredith, Evan Kirkpatrick : Palo Alto, C E., Homerian Hall P

Meredith, William John : Palo Alto, Educ. gr., Homerian Hall P
A. B., University of Washington, 1900.
Mereen, John D. : Minneapolis, Minn., M. E., 57, Delta Upsilon
[2]Merrill, Philip : Shelburne Falls, Mass. M. E.†, 545 Bryant P
Merrill, Paul Willard : Saratoga, Math., 108, 134 Encina
[1]Merriman, Lynn : Stanford University, Chem., 34, Delta Tau Delta
Merritt, Floyd Calhoun : San Luis Obispo, Geol., 42, 116 Encina
Mersereau, Irene : Pasadena, Engl. ,11, 46 Roble
Meston, Archibald F. : Santa Barbara, M. E., 44, 132 Encina
Metzner, Florence Prior : San Francisco, Germ., 24, Pi Beta Phi
[1]Meyers, Alfred E. : Stanford University, Phyl. gr., Mariposa Hotel
A. B., Stanford, 1908.
Miano, John Norton : San Jose, E E., 88, San Jose S
Michod, Hazel Lorena : Los Angeles, Frn., 71, 55 Roble
[2]Millar, Lois : San Rafael, Law, 74, 16 Alvarado
[2]Miller, Alvera Elizabeth : Skyland, Engl., 75, 661 Everett P
[1]Miller, Jennett Laurie : San Francisco, Hist., 11, 84 Sanchez, S F, S
Miller, James Irvin : Santa Cruz, Geol., 8, 117 Encina
[2]Miller, John Martin : Reedley, Zool., 104, Marchmont Club
Miller, John Owen : San Francisco, C. E., 73, 9a Salvatierra
Miller, Lillian Marie : Denison, Iowa, Germ., 106, Walden Club
Miller, Maude A. : Salt Lake City, Utah, Frn., 39, Manteista
Miller, R. Justin : Hanford, Law, 8, 255 Ramona P
[1]Miller, Samuel J. : McPherson, Kan., Germ. gr., 819 Alma P
A. B., McPherson College, 1895; A. M., Univ. of Kansas, 1897.
Miller, William Stanford : Palo Alto, C. E., 12, 630 Bryant P
Milliken, Calla Rhetta : Colton, Engl., 104, 9 Roble
Milliken, Edward R. : Palo Alto, Law gr., 602 Waverly P
A. B., Pomona College, 1904.
Milliken, Ralph LeRoy : Stanford Univ., Hist., 83, Acacia
[2]Millis, William Lee : Napa, Geol., 38, 158 Encina
[1]Mills, Anna Rae : San Jose, Germ. gr., 451 Homer P
A. B., Stanford, 1908.
Mills, Cecil Edgar : Camas, Wash., Law, 13, 235 Emerson P
[2]Mills, Wallace C. : Janesville, Wis., M.E., †, 225 Channing P
Millspaugh, Winnefred : Los Angeles, Hist., 41, K. A. Theta
Mini, Theodore : Los Gatos, C. E. sp., 7, 235 Emerson P
Minturn, LeRoy : San Francisco, E. E., 76, D. K. Epsilon
Mirrielees, Lucia Bush : Bigtimber, Mont., Engl., 71, 6 Madroño
Mitchell, DeWitt Charles : San Diego, Law, 2, 627 University P
[1]Mitchell, John Shepard : Ontario, Law gr., 170 Encina
A. B., Stanford, 1908.

Mitchell, Marion Kate : San Diego, Hist., 13, 627 University P
[1]Mitchell, Marion Otis : Alameda, Engl., 26, K. K. Gamma
Mitchell, Merle Ellsworth : Santa Rosa, Law, 8, 249 Kipling P
Mitchell, Mowatt Merrill : Los Angeles, Econ., 39, Zeta Psi
Mitoma, Taizo : East Oakland, E. E. sp., 141, 217 Encina
Mochizuki, Kazumara : San Mateo, Econ. sp., 13, Japanese Club
Moerdyke, Nathaniel Perry : Pasadena, Law, 67, Phi Delta Theta
Monroe, Helen : Omaha, Nebr., Germ., 18, K. Alpha Theta
[2]Monteith, Minerva : Paso Robles, Phys., 88, 11 Roble
Montgomery, Chester Arthur : Palo Alto, E. E., 78, 333 Kipling P
Montgomery, James E. : Greenfield, Ind., Econ., 99, Sigma Chi
Montgomery, Orland F. : Tulare, Phyl., 64, Kappa Sigma
Moore, David J. : New Wilmington, Pa., Law, 98, 101 Encina
Moore, Edith Harriet : Pasadena, Germ. gr., 21 Madroño
A. B., Stanford, 1908.

Moore, Jennie Cloughly : San Diego, Math., 61, 16 Alvarado
Moore, Kirke Tonner : Tucson, Ariz., Law†, 51, Delta Tau Delta
Moore, Louis Forsythe : Palo Alto, Geol. sp., 11, 415 Lytton P
[2]Moore, Roy Webb : Monrovia, Geol.†, Delta Tau Delta
B. S., University of Arizona, 1906.

Moorhead, James Barbour : Los Angeles, M. E., 68, 36 Encina
Morehouse, Arthur Winfield : Palo Alto, M. E., 100, 405 Kipling P
Morehouse, Geneva Harriet : Palo Alto, Engl., 15, 405 Kipling P
Morehouse, William Frank : Palo Alto, Chem., 95, 405 Kipling P
Morell, George Fowler : Palo Alto, Law, 59, D. K. Epsilon
Morgan, Edith Theresa : Columbia, Engl., 12, 16 Alvarado
Morgan, Elizabeth Hoadley : Belvedere, Engl., 13, 7 Lasuen
Morgan, Jeannette Catherine : San Diego, Germ., 91, 54 Roble
Morgan, Jessie Caroline : Los Angeles, Hist., 57, Delta Gamma
Morgan, Octavius Weller : Los Angeles, C. E., 76, Sigma Nu
Moroney, Carl Joseph : Palo Alto, M. E., 40, 405 Emerson P
Morris, Benjamin F. : Lewiston, Idaho, Econ., 26, Delta Upsilon
Morris, Charles Shoemaker : Pasadena, Bot., 94, Encina
Morris, Samuel Brooks : Pasadena, C. E., 15, Encina
Morrison, Charlotte W. : Berkeley, Engl., 50, Walden Club
Morrison, George D. : Los Angeles, Econ., 21, Welakahao
Morrison, Lela Idel : Los Angeles, Engl., 14, 1 Alvarado
Morrison, Wayland A. : Los Angeles, Phyl., 41, Delta Tau Delta
[2]Morton, Ivan : San Francisco, M. E., 1, 1750 Cl'mnt, S F, S
[2]Morton, Stuart Curtis : San Francisco, Econ., 10, D. K. Epsilon

[1]Moser, Charles : Mt. Healthy, Ohio, C. E. gr., 235 Emerson P
A. B., Stanford, 1908.
Moss, Harold Rae : Palo Alto, Chem., 35, 127 Cowper P
Moss, Lora Belle : Palo Alto, Math., 86, 353 Lytton P
Motomura, Seizo : San Francisco, E. E., 82, 656 Channing
Mott, Albert Gifford : Lawrence, E. E., 116, 10 Encina
Mott, James Wheaton : Salem, Ore., Engl., 97, Sigma Chi
Mount, Edith Hazel : Oakland, Zool., 13, 67 Roble
Mudd, Harvey Seeley : Los Angeles, Econ., 38, Delta Tau Delta
Mues, Merle Brownie : Palo Alto, Germ., 59, 436 Tasso P
Munger, Arthur Lee, Jr. : Palo Alto, Phyl., 72, 30 Encina
[1]Munier, Ferdinand Francis : San Diego, Law, 32, 121 Encina
Murakami, Yoshi : San Francisco, M. E., 14, Japanese Club
Murdoch, Effie L. : Salt Lake City, Utah, Lat., 97½, 24 Roble
[1]Murgotten, Francis Clarke : San Jose, Grk. gr., San Mateo S
A. B., Stanford, 1901; A. M., 1908.
Murphy, Arthur Alban : Portland, Ore., Law, 106, 129 Encina
Murphy, Robert Bivins : Tucson, Ariz., Law, 99, Encina
Myer, Arthur Henry : San Francisco, Chem., 38, 96 Encina
[2]Myers, Harvey Hallam : Hemet, Law, 18, 171 Encina
Myers, James Walter : Portland, Ore., Educ. gr., 1531 Waverly P
A. B., Stanford, 1907.
Myers, Robert Folsom : Bakersfield, E. E., 60, 57 Encina
Nagel, Helen May : Stanford Univ., Draw., 13, 9 Alvarado
[2]Naka, Kaizo : San Francisco, Econ. sp., 558 Forest P
[2]Nakamura, Masawo K. : San Francisco, M. E. sp., 656 Channing P
Nash, Beth Hazel : Los Angeles, Engl., 72, 12 Alvarado
Nash, Edward Jay : Palo Alto, E. E., 128, 317 Ramona P
Nash, Howard Frank : Palo Alto, Geol., 74, 318 Emerson P
Nason, Harry Ward : Alameda, Econ., 7, Kappa Alpha
[1]Nasu, Kihei : San Jose, Engl. sp., San Jose, S
[1]Neal, Malcolm Allan : Belmont, Geol., 9, Belmont B
Nealey, Charles Henry : Cheney, Wash., Geol., 40, 635 Bryant P
[1]Nelson, Ernest Bruce : San Jose, Draw., 45, San Jose, S
Nelson, Hans Christian : Field's Landing, Law, 42, 52 Encina
[1]Nelson, Ina May : Lake Valley, N. M., Chem. gr., 20 Madroño
A. B., Stanford, 1908.
Newberg, Lucile J. : San Bernardino, Hist., 79, Walden Club
Newcomer, Erval Jackson : Palo Alto, Ent., 12, Forest Court P
Newland, Lloyd : Palo Alto, Law, 104, Acacia
Newlin, Myrtle Alverson : Fresno, Lat., 74, 14 Madroño

[1]Newman, Carl Emery : Madera, Chem., Theta Delta Chi
Newton, Douglas Erle : Woodbridge, Hist., 9, 121 Encina
Nichols, Viola Beatrice : Pasadena, Bot., 9, 38 Roble
[2]Nishio, Mackee : San Francisco, Law, College Terrace
Niven, Isabel Ogilvie : San Diego, Educ.†, 8, 12 Roble
A. B., University of New Mexico, 1907.
Noble, Isabel Blake : Fresno, Lat., 12, Pi Beta Phi
Nolan, Edward Dana : San Luis Obispo, Geol., 13, Encina
Nomoto, Aranoske : San Francisco, C. E. sp., 10, 208 Univ. Ave.
North, W. Cuyler : Cupertino, E. E., 80, Cupertino, C
Norton, Ione May : Bloomington, Lat., 71, 9 Roble
Norvell, Louise : Merced, Hist gr., Manteista
A. B., Stanford, 1907.
Norwood, Clifford Taylor : Redlands, M. E., 56, 135 Encina
Nye, Frank Charles : Riverside, Econ., 39, Theta Delta Chi
Nye, Helena May : Palo Alto, Germ. gr., 455 Univ. Av, P
Ph. B., Marietta College, 1902; A. B. Stanford, 1905.
Oakey, James Vernon : San Bernardino, Law, 49, 168 Encina
Oakey, John Miller : San Bernardino, C E., 61, 168 Encina
Obayashi, Fukuzo : Tokyo, Japan, Engl. sp., 13, 14 Alvarado
[2]O'Brien, Ethel R. : Merced, Hist., 39 Roble
Ogier, Edward Hahn : Pasadena, E. E., 5, Theta Delta Chi
[1]Ogier, Margaret : San Jose, Zool. gr., The Elms, S J, S
A. B., Stanford, 1908.
Ogilvie, Paul Morgan : Los Angeles, Law, 4, Sigma Chi
Ohashi, Yasu-Saburo : San Francisco, E. E. sp., 14, 585 Forest P
Oldham, John Henry : Ocean Park, Phyl., 8, 5 Lasuen
Oliver, Frederick H. : Clinton, Ill., Geol. sp., 8, Delta Upsilon
Oliver, Jean Redman : Chico, Phyl., 15, 21 Lasuen
Olsson-Seffer, Ragnar Michael : Fruitvale, Phyl. gr., 112 Circle P
A. B., Helsingfors and Upsala, 1900.
Oltmans, Jacob : Melvin, Ill., C. E., 50, 533 Ramona P
Oppenheimer, Sade : Spokane, Wash., Engl., 57, 27 Roble
Osborn, Mabelle Frances : Palo Alto, Frn., 70, Alpha Phi
Osborne, Clarence Bristol : Los Angeles, Geol., 97, 106 Encina
Osborne, Mattie Rankin : Santa Barbara, Engl., 75, 7 Lasuen
Osgood, Marion : San Jose, Germ., 74, La Camaraderie
Ostroski, Herbert M. : Spokane, Wash., Law, 53, 59 Encina
Otis, Arthur Sinton : Pasadena, C. E., 33, Encina
Otto, Lucile Elizabeth : Palo Alto, Germ., 76, 359 Emerson P
Owen, Chauncey Carrol : Pasadena, Law, 45, Delta Upsilon

[2]Owen, Elise Dorrance : Stockton, Hist. gr., G. P. Beta
A. B., Stanford, 1907.
Owen, Henry Dorrance : Stockton, C. E., 12, Sigma Chi
Packard, Ashley Burdett, Stanford Univ., Hist., 68, D. K. Epsilon
Packard, Henry Jessup : Ontario, Geol., 4, 91 Encina
Packard, Walter E. : Palo Alto, Econ. gr., 29 Encina
B. S. A., Iowa State College, 1907.
Palmer, Ethel Rebecca : Los Angeles, Engl. 39, Gamma Phi Beta
Palmer, Frederick Robie : San Jose. Educ., 64, Welakahao
Park, Carl Joseph : Palo Alto, C. E., 23, 611 Gilman P
Park, Charles V. : Kidder, Mo., Econ., 78, 51 Encina
Park, Harriet : Palo Alto, Draw., 37, 611 Gilman P
[1]Parker, Edwin Bidwell : Oakland, Chem. sp., 2, College Ter.
[1]Parker, Earnest Laverne : Orange, C. E. sp., 40, 136 Encina
Parker, Franklin Thomas : Astoria, Ore., E. E., 42, College Terrace
Parkes, Arthur Herbert : Lakeside, O., Law, 7, 742 Bryant P
[1]Parma, John A. : Santa Barbara, Econ., 15, Kappa Alpha
Parsons, Benjamin Everett : Highland, Geol., 38, 78 Encina
Parsons, Maurice Giesy : Los Angeles, C. E., 45, 14 Encina
Parton, Floyd A. : San Jose, Ent., 51, Phi Kappa Psi
Patrick, Howard Borland : Visalia, Econ.†, 20, P. G. Delta
[1]Patterson, Alice Mabel : San Jose , Bot. gr., 175 Almaden, SJ, S
A. B., Stanford, 1908.
Patterson, Edith Woodburn : San Jose, Educ., 76, 4 Roble
Patterson, Ella Jane : Long Beach, Hist., 75, 617 High P
Patterson, John T.: Detroit, Mich., Engl.†, 9, 255 Lytton P
Patterson, Tom Scofield : Seattle, Wash., Law, 5, 611 Waverly
Patterson, William Herbert : Palo Alto, Law, 36, Palo Alto P
[1]Patzwald, Otto Reinhold : Mayfield, Germ. gr., Hoitt School
A. M., University of Missouri, 1905.
Paul, Byron H. : Alameda, Econ., 3, Kappa Alpha
[1]Payne, Ira Dawson : Morgan Hill, Educ., College Terrace
Pearsall, Eva : Tacoma, Wash., Lat., 106, Alpha Phi
Peaslee, Bertha Amelia : Pasadena, Draw. gr., 619 Webster P
A. B., Stanford, 1905.
Peaslee, W. Dhu Aine : Blue Cañon, E. E., 56, 4 Lasuen
Peck, Sedley Clarendale : Compton, Law, Sigma Chi
Peckham, Arthur Bixie : San Jose, Geol., 16, 74 N 12th, S J, S
Peckham, Ignatius Martin : San Jose, Law, 11, 74 N 12th, S J, S
Pemberton, Cyril E. : Palo Alto, Bot., 40, 846 Bryant P
Pemberton, John Rothwell : Palo Alto, Geol., 104, 846 Bryant P

Percey, Helen Gladys : Ocean Park, Engl., 12, Delta Gamma
Perdew, William Edward : Visalia, Chem., 17, 96 Encina
Perkins, Ethel Mary : Palo Alto, Zool., 73, 451 Channing P
Perkins, Genevieve Hazel : Palo Alto, Zool., 73, 451 Channing P
Perring, Anna Louise : Palo Alto, Engl., 31, 737 Bryant P
[1]Perry, George Dorn : Sandusky, Ohio, Econ., 22, 515 Waverly P
Perry, Wilfred S. : Waterbury, Conn., Econ., 105, 7 Encina
Peterson, Clarence J. : Honolulu, T. H., Geol., 79, 46 Encina
Peterson, Elsa : Honolulu, T. H. Bot., 85, 52 Roble
Phelps, Clarence Lucien : Mayfield, Educ., 39, College Terrace
[2]Phelps, John : Los Angeles, Law, 16, S. A. Epsilon
B. S., St. Vincents College, 1906.
[2]Phillips, Marie Angelita : Los Angeles, Engl., 1 Alvarado
[1]Phinney, Arthur A. : Seattle, Wash., Law, 2, Phi Kappa Psi
[2]Phinney, Will Carleton : Seattle, Wash., Law, Phi Kappa Psi
Pickering, Loring C. F., San Francisco, Law, 14, 90 Encina
Pieper, James Frederick : Palo Alto, C. E., 77, 1029 Ramona P
Pier, Earl Harriman : Santa Clara, Law gr., Santa Clara
A. B., Stanford, 1907.
Pierce, Samuel Hatch : Palo Alto, Law sp., 118, 633 Channing
Pierpont, Philip : Nordhoff, C. E., 32, Sigma Chi
Piggott, Helen Winifred : San Luis Ob'po, Engl., 11, 30 Roble
[2]Pittenger, Walter Ralph : Fallbrook, Hist., College Terrace
[1]Plummer, Ethel Tennent : Alameda, Hist., 21, 7 Lasuen
Poage, Leland Starke : Azusa, Econ., 111, 24 Encina
Poindexter, Robert Wade : Los Angeles, Chem., 39, 60 Encina
[2]Poland, Lester Alison : Eureka, C.E., 5 Lasuen
Polaski, Rosetta : Los Angeles, Germ., 25, Walden Club
[2]Polhemus, Edward R. : San Francisco, Econ., 5 Lasuen
Polhemus, James Henry : Portland, Ore., C. E., 36, Kappa Sigma
[1]Politzer, Jerome M. : Alameda, Law, 62, 21 Lasuen
Pomeroy, Earl S. : San Jose, Phyl., 10, San Jose S
[2]Pomeroy, Frank Kenneth : Palo Alto, Phyl., 1, 947 Waverly P
Poole, Herbert Clayton : Santa Barbara, E. E., 9, 42 Encina
[2]Pooley, Beuber Leore : Palo Alto, C.E., 806 Bryant P
Poor, Henry Varnum : Palo Alto, Econ., 44, 353 Melville P
Popenoe, Paul Bowman : Altadena, Engl., 71, 4 Lasuen
Porter, Estelle Caswell : San Fernando, Engl., 10, Alpha Phi
Porter, William Stratton : Santa Barbara, Law, 9, 42 Encina
Post, Fred Dan : Stanford Univ., Chem., 37, Encina
Post, Mary Bolton : Palo Alto, Engl., 36, 515 Everett P

Pratt, James Hamilton : Honolulu, T. H., Chem., 73, 39 Encina
[2]Preciado, Abram A. : Madera, Law, 35, 126 Encina
Preisker, Ernest Charles : Milpitas, Law, 70, 32 Encina
Prescott, Basil : San Diego, Geol., 94, 434 Middlefield P
[1]Presley, George Joseph : Berkeley, Law gr., 110 Encina
A. B., Stanford, 1907.
Price, Christine : Palo Alto, Hist., 41, 543 Byron P
Price, Harry Lawrence : San Diego, Law, 78, 66 Encina
Price, Jacob Meday : Palo Alto, Chem., 104, 543 Byron P
[1]Pridham, Edwin Stewart : San Gabriel, Phys., 115, 51 Encina
[1]Proctor, Asa Glisson : Woodland, C. E., 81, 80 Encina
Prout, Franklin Stanton : Palo Alto, Geol., 14, 131 Cowper P
Pruett, John Floyd : Fallbrook, Phyl., 78, 65 Encina
Pruitt, Drew, Jr. : Los Angeles, M.E., 49, 559 Cowper P
[1]Pugh, Doris : Redwood City, Engl. gr., Redwood City, R
A. B., Stanford, 1907.
Pugh, Harriet Holmes : Redwood City, Hist., 109, Redwood City, R
Purcell, Charles Dean : Taylorville, Ill., Law sp., 10, 8 Alvarado
Purdum, Edith May : Colton, Engl., 101, 53 Roble
Purdum, Ernest Reynolds : Colton, Law, 71, 179 Encina
Purvis, Frank Reeves : Redlands, Geol., 11, Welakahao
Rainbolt, Esther : Holtville, Germ., 7, 64 Roble
Raines, Herbert : Campbell, E. E., 15, College Terrace
Ramsdell, Harvest Richard : Kent, C. E., 47, Cardinal Club
Rand, Chester : Los Angeles, E. E. sp., 25, Schnell Club
[2]Randall, Charles Alfred : Redding, Geol. sp., 98, 105 Encina
Randall, Josephine L. D. : Stanford Univ., Zool., 83, College Terrace
Ransom, Charles K. : Anaheim, E. E., 46, 193 Encina
[1]Ransom, Frederic G. : Stanford Univ., Chem., 118, College Terrace
Rawson, James Peterson : Hemet, Educ., 33, 264 Hamilton P
[2]Ray, James Chandler : Palo Alto, Geol., 33, 951 Bryant P
Raymond, Cladius H. : Los Angeles, Econ., 77, S. A. Epsilon
Rea, Elizabeth Tully : Gilroy, Hist., 9, 30 Madroño
Read, Bill : Somerfield, Pa., C. E., 110, 74 Encina
Reed, Harold Eugene : Portland, Ore., E. E., 16, Kappa Sigma
[1]Reed, Harry Earl : Mayfield, Econ., 33, Evergreen Park
[1]Reed, Pearl Ethelyn : Pomona, Hist. gr., 521 Everett P
A. B., Pomona College, 1907.
Reene, Jane Elinor : San Jose, Engl., 12, 741 S 3d, S J, S
Reene, Marie Elizabeth : San Jose, Engl., 13, 741 S 3d, S J, S
Reighard, James Gamble : Pasadena, Engl., 5, 525 Channing P

Reilly, John Franklin : Portland, Ore., Law, 107, 10 Encina
Reining, Charles : Palo Alto, Germ., 96, 601 Webster P
Reyburn, Chester Ray : Fresno, C. E., 37, 180 Encina
Reyburn, Glenn William : Fresno, Phyl., 52, 180 Encina
Reyburn, Ida May : Fresno, Zool., 23, 325 Alma P
Reynolds, Leon Benedict : Palo Alto, C. E. gr., 712 Bryant P
A. B., Hillsdale College, 1906.
Reynolds, Ralph Hubbard : Pasadena, Law, 31, Zeta Psi
Rhines, Charlie Auborn : Visalia, E. E., 13, 207 Hawthorne P
[1]Rhyne, Homer : Paso Robles, Geol., 120, 107 Encina
Rible, Blanch : Sacramento, Grk., 16, 559 Cowper P
Rible, Lillie May : Sacramento, Engl., 44, 559 Cowper P
Rice, Edward Waldo : Stanford Univ., Chem. sp., 103, Fire House
Rice, Warren Sumner, Edenvale, Geol., 68, San Jose, S
[1]Richards, John Percy : San Jose, Chem., 13, 19 Encina
Richardson, Ethel Nina N. : Santa Paula, Frn., 5, 2 Roble
Richardson, Eulalia : Tropico, Phys., 41, 23 Roble
Richardson, Girard Nye : Piedmont, Law, 64, D. K. Epsilon
Richardson, John Quince : Pontiac, Ill., Law, 6, 5 Lasuen
Richardson, Walter H. : Santa Barbara, C. E., 54, 25 Encina
Riddell, John Henry : Brazil, Ind., C. E., 104, 68 Encina
[2]Riehl, Oscar : Palo Alto, E. E., 536 Ramona P
Riesner, Roy Milton : San Francisco, Geol., 29, 889 Capp, S F, S
[1]Righter, George Lutes : Campbell, C. E., College Terrace
[2]Ringheim, David Theodore : Long Beach, Law, Sigma Chi
[2]Rittingstein, Herman : Oakland, Law† 84 Encina
Rixford, Halsey Luther : San Francisco, Econ., 70, D. K. Epsilon
[2]Robbins, Charles Harvey : Los Angeles, Law, 2, Phi Kappa Psi
Robbins, James Clayton : Spokane, Wash., Geol., 35, 20 Encina
Roberts, Charles Loring : Eureka, C. E., 37, Theta Delta Chi
Roberts, John Munsey : Columbia, Tenn., Grk. gr., Castro P
A. B., Vanderbilt University, 1901; A. M., 1901.
[2]Roberts, John Walter : Redlands, Econ., 19, Phi Delta Theta
Roberts, Ruberta Augusta : San Jose, Zool., 73, Pi Beta Phi
Robertson, Harry : Redwood City, Chem., 68, Redwood City R
[1]Robertson, Ruth Edna : Redwood City, Hist., 60, Redwood City, R
Robertson, William Ardis : Los Angeles, Law, 35, 16 Salvatierra
Robinson, Edith Emma : Salinas, Latin, 106, 324 Emerson P
Robinson, Ethel Margaret : Ventura, Math., 65, 13 Roble
[1]Robinson, Lucy Adeline : Los Angeles, Math. gr., Manteista
A. B., Stanford, 1907.

[2]Robinson, Philip Archibald : Benicia, E. E., 35, 196 Encina
[1]Robinson, Sarah Alice : Fruitvale, Draw. gr., 43 Roble
A. B., Stanford, 1907.
Robotham, Edna May : Stanford Univ., Frn., 113, 7 Lasuen
Rockey, Eugene Watson : Portland, Ore., Germ., 101, Zeta Psi
Roedel, Alice Louise : Palo Alto, Lat., 107, Alpha Phi
Rogers, Edwin Allan : Palo Alto, M. E., 64, 612 Waverly P
Rogers, Herbert Thomas : San Jose, E. E., 32, San Jose, S
Roll, Julia Irene : Santa Clara, Germ., 42, 2 Salvatierra
Rose, Jessie Perkins : Palo Alto, Bot., 91, 706 Cowper P
Rosenberg, Albert H. : Los Angeles, E. E., 110, Encina
Rosenkranz, Elias Victor : Los Angeles, Law, 30, Palo Alto Hotel P
[1]Rosenthal, Phyllis Hana : San Jose, Germ., 70, 62 Roble
[2]Ross, Clayton Irvine : Wichita, Kans., E. E., 515 Waverly P
Ross, Harry Scott : Pasadena, Chem., 104, Delta Upsilon
[1]Ross, Lee Thornton : Belmont, Law gr., Belmont B
A. B., Stanford, 1907.
Ross, Perley Ason : Fallbrook, Phys., 111, College Terrace
Roth, Almon Edward : Ukiah, Law, 82, 9a Salvatierra
Rounds, Merle Ballard : Wichita, Kans., Econ., 31, Phi Gamma Delta
Rowe, Ethel Elizabeth : Putnam, Conn., Germ., 101, Madroño
Rowe, Evelyn More : Santa Barbara, Frn., 15, Madroño
Rowell, Ola Lois : San Jose, Zool. 102, 222 S Priest,SJ, S
Runyon, John Howard : San Jose, Geol., 54, San Jose S
[1]Rush, Mary Elizabeth : Hollywood, Germ., 42, La Camaraderie
Russell, Henrietta Elizabeth : Tulare, Lat., 84, K. A. Theta
Rust, Everett Winder : Pasadena, Bot., 106, 153 Encina
[2]Rutherford, Dorsey Jay : Pomona, C. E., 20, Encina
Rutledge, John D. : Emmettsburg, Ia., Law sp., 5, Delta Upsilon
Ryan, John Joseph : San Jose, Hist. gr., San Jose S
A. B., Stanford, 1903; A. M., 1904.
St. John, Royal Upson : Benicia, C. E., 13, 721 Emerson P
Sampson, Carlos Eugene : Stockton, E. E., 76, D. K. Epsilon
Sampson, George Henry : Portland, Ore., Geol. gr., Encina
A. B., Stanford, 1897.
Sampson, Ruth Adele : San Diego, Engl, 13, 2 Salvatierra
Sanborn, Clarence Charles : Tilton, N. H., Econ., 108, 176 Encina
Sanborn, Ralph Edward : Yuba City, Chem., 11, Chi Psi
Sandstedt, Carl Edward : Spangle, Wash., C. E., 49, 635 Bryant P
Sawyer, Ernest Walker : Stanford Univ., C. E., 95, 167 Encina
[2]Scheele, Norbert : Palo Alto, Germ., 431 Kipling P

Schellinger, Alfred K. : DeRuyter, N. Y., Geol., 73, 533 Ramona
Schmidt, Henry Emil : Redlands, Law, 9, Encina
Schnack, Adolph G. C. : Honolulu, T. H., Chem., 51, 4 Encina
Schnack, Ferdinand J. H., Honolulu, T.H., Law, 109, Encina
Scholefield, Crighton Welch : Hollister, M. E., 12, 334 Lincoln P
[1]Schuele, George E. : Vancouver, Wash., E. E., 56, Acacia
Schuler, Irvin Henry : Yuba City, M. E., 41, Cardinal Club
[1]Schutz, Charles Henry : Palo Alto, Law, 4, Chi Psi
Schwabacher, Samuel I. : San Francisco, Chem., 112, 111 Encina
Schwennesen, Alvin Theodore : Clayton, Geol., 81, 3 Encina
Scofield, Frank Alson : Dunnigan, Hist., 14, 21 Lasuen
Scofield, William Launcelot : Palo Alto, Bot., 25, 800 University P
Scott, Andrew O. H. : Mayfield, Geol., 12, College Terrace
Scott, Leland : Alameda, Draw., 44, D. K. Epsilon
Scudder, Gertrude Louise : Moss, Engl., 11, 65 Roble
Scull, Carolyne B. : Santa Barbara, Engl., 54, 1013 Ramona P
[2]Seargeant, James Everett : Palo Alto, Law†, 36, 113 Circle P
A. B., Ewing College, 1905.
Sears, Harry Johnson : Palo Alto, Econ., 27, 1527 Waverly P
Sears, Jesse Brundage : Palo Alto, Educ., 72, 1527 Waverly P
Seeley, Marjory : Los Gatos, Hist., 12, 13 Roble
Severy, Clarence Luther : Pasadena, Geol., 111, Delta Upsilon
Severy, Hazel Wood : Pasadena, Chem. gr., Manteista
A. B., Stanford, 1907.
Sevier, Florence May : Eureka, Lat. gr., Manteista
A. B., Stanford, 1907.
Seybolt, Marion Leigh : Mayfield, Engl., 98, Mayfield M
Sferlazzo, Carlo : Lampedusa, Italy, Law sp., 17, Mayfield M
[1]Shaner, George Franklin : Los Gatos, Law gr., S. A. Epsilon
A. B., Stanford, 1907.
Sharp, Homer J. : Long Beach, C. E.†, 9, 9 Encina
[1]Shaw, Sidney Burton : Campbell, E. E., College Terrace
Sheibley, Edward Gwyn : Stanford Univ., C. E., 106, Chaffee Club
Sheldon, Edwin Rowley : Palo Alto, Law, 10, Sigma Nu
Sheldon, Josephine Wilmarth : Gilroy, Germ., 10, 22 Lasuen
Shelton, James Errett : San Jose, Law, 48, Stanford Inn
Shelton, William Cortez : San Jose, Law, 96, Stanford Inn
Shepardson, Anita A. : Los Angeles, Hist., 42, 31 Roble
Sherfy, Samuel Hash : Blountville, Tenn., Bot., 73, 515 Waverly P
Shibamiya, Yashohiko : Tokyo, Japan, Engl., 100, Japanese Club
Shillingsburg, Anne Maria : San Jose, Econ., 8, K. K. Gamma

Shinn, Alice Eleanor : Oakland, Engl., 61, Walden Club
Shoemaker, Benjamin Dey : Pasadena, Chem., 36, College Terrace
Shoemaker, Clyde Clarence : Orange, Law, 45, 144 Encina
[1]Shoemaker, Jesse Ralph : Pomona, Chem., 5, Sigma Nu
Shores, Ethelbert : Los Angeles, Geol., 14, Beta Theta Pi
Show, Stuart Bevier : Palo Alto, Bot., 94, 353 Melville P
Shumate, Anna Matt : Palo Alto, Hist., 39, 730 Bryant P
Shutts, Arthur Burton : Stanford Univ., Geol., 77, Acacia
Sidwell, Wilson : Palo Alto, C. E., 91, 35 Encina
[1]Sieber, Elsa Marie : Woodland, Germ., 37, 26 Madroño
Siefert, Alfred L. Camille : Pasadena, Phyl., 12, Cardinal Club
[1]*Silent, Chester : Los Angeles, Law gr., Delta Tau Delta
A. B., Stanford, 1907.
Sinclair, Ewart Gladstone : Palo Alto, C. E.†, 14, 135 Everett P
Sinclair, Roy Willard : Palo Alto, Geol., 13, 135 Everett P
Sirdevan, William Henry : Olean, N. Y., Geol., 88, 143 Encina
[2]Skaife, Mary : San Francisco, Engl., 1 Alvarado
Skinner, Edna Eugenia : Los Angeles, Hist., 8, 49 Roble
Skolfield, Esther May : Portland, Ore., Phyl., 15, La Camaraderie
Slack, Walter : Juanita, Nebr., Law, 76, 172 Encina
[1]Slade, Russell Clark : Menlo Park, Econ., 2, Beta Theta Pi
Sloan. Frank Curry : Palo Alto, Econ., 31, 627 Waverly P
[2]Small, Horatio L. : Palo Alto, C.E., 334 Cowper P
Smallpage, Lafayette J. : Pacific Grove, Law, 61, 125 Encina
Smith, Caroline Ettella : Los Angeles, Engl., 12, Madroño
[1]Smith, Caroline R. : Evanston, Ill., Frn. gr., Alpha Phi
A. B., Stanford, 1908.
Smith, Charles Austin : Monrovia, Law sp., 5, Encina
Smith, Charles Piper : Mayfield, Ent. gr., Marchmont
B. S., Purdue University, 1903.
[2]Smith, Chauncey : Elie, Can., M. E., Theta Delta Chi
Smith, Egbert Alling : Napa, Law, 71, 429 Forest P
Smith, Ernest Nathaniel : Stanford Univ., Law, 42, Chi Psi
[1]Smith, Grover Cleveland : Colton, Draw., 28, 601 Melville P
Smith, Harry Ellsworth : Saratoga, Law, 43, 134 Encina
[2]Smith, Hazel Gladys : Palo Alto, Grk.†, 327 Cowper P
Smith, Jesse Winter : San Jose, C.E., 116, 400 Waverly P
[1]Smith, Lucas F., Jr. : Santa Cruz, Law, 66, Kappa Sigma
Smith, Richard Garbett : Los Angeles Geol., 93, 13 Encina
Smith, Stanley Bassett : Campbell, Econ., 13, 147 Encina

*Died Sept., 1907.

Smith, Warren Perce : Portland, Ore., E. E., 93, 167 Encina
Smitherum, Harrison : San Jose, C. E., 14, Stanford Inn
Snell, Thomas William : West Saticoy, E. E., 15, 1a Alvarado
[1]Sobey, Wilfred John : San Francisco, Geol., 1, Phi Delta Theta
Soo-Hoo, Peter : San Rafael, C. E., 77, 10 Alvarado
Soper, Edgar Kirke : Palo Alto, Geol., 111, 305 Lytton P
Southard, William White : Redlands, Phyl., 47, 49 Encina
[1]Spaulding, Silsby Morse : Los Angeles, Chem., 14, Beta Theta Pi
Spencer, Esther Jean : Los Angeles, Lat. gr., 938 Scott P
A. B., Stanford, 1907.
Sperry, George A., Jr. : San Jose, Ed. sp., 24, 264 Hamilton P
Spinner, Mabel Mary : Eureka, Nevada, Math., 91½, 11 Roble
[1]Squire, Mary Louise : Visalia, Phyl. gr., 17 Madroño
A. B., Stanford, 1908.
Staber, Ernest Henry : Mineral P† Wis. Chem., 50, 415 Lytton P
Stager, Cora Elizabeth : Stanford Univ., Germ., 81, Walsh Cottage
Stahl, John A. : San Francisco, Econ., 11, 8 Alvarado
Stallcup, Margery Bruen : Tacoma, Wash., Law gr., 25 Roble
A. B., Stanford, 1908.
Stanley, Leo Leonidas : San Miguel, Phyl., 87, 39 Encina
Stanton, Frederick Leroy : Spokane, Wash. Law, 33, Phi Kappa Psi
Stark, Theodore K. : Grundy Center, Ia., Econ., 10, 832 Kipling P
[1]Starnes, Xaver Brand : Asheville, N. C., Geol., 90, 465 Hawthorne P
Starr, Sarah Helen : Seattle, Wash., Hist., 68, K. K. Gamma
[2]Stauf, Ida : Palo Alto, Draw., 64, P. A. Hotel P
Steel, Donald : Brownsville, Geol., 116, 460 Channing P
Steele, Viola Alice : Los Angeles, Engl., 103, Walden Club
Steinbeck, Charles Earl : Stockton, M. E., 78, 21 Encina
Steinbeck, Grace Clare : Stockton, Engl., 9, 47 Roble
Steinberger, Arthur Adolph : San Fran. Law, 57, 16 Salvatierra
Steinberger, Robert M. : San Francisco, Econ., 11, 16 Salvatierra
[1]Stelle, Allen Clifford : Pasadena, Law†, 3, Phi Gamma Delta
Stephenson, Burroughs Agin : Palo Alto, C. E., 24, 847 Bryant P
[2]Stephenson, Rufus Town : Belmont, Grk., gr., Belmont
A. B., Drury Coll., 1899; A. M., Yale Univ., 1906.
Sterling, Edward Canfield : Redlands, Econ., 107, D. K. Epsilon
Sterne, Ruth Grace : San Diego, Germ., 76, Pi Beta Phi
Stevens, Archie McDonald : Palo Alto, M. E., 83, 926 Cowper P
[1]Stevens, Esther Stuart : Berkeley, Engl. gr., Alpha Phi
A. B., Stanford, 1908.
[1]Stevens, Sam Stanclift : Berkeley, Econ., 21 Lasuen

Stewart, John Elmer : Stanford Univ., Law, 111, 118 Encina
Stewart, Paul : Los Angeles, Law, 106, 106 Encina
Stidston, Russell Osborne : Los Gatos, Chem., 13, Los Gatos L
Stinson, Sylvia Della : Palo Alto, Germ., 72, 223 Channing P
[2]Stock, Lester Howard : San Jose, C. E., 117 Vine, S J, S
Stockwell, Eugene L. : Cottage Grove, Ore. Law, 107, 89 Encina
Stolle, Francis : Palo Alto, Phyl., 43, 683 Hamilton P
Stolle, Helen : Palo Alto, Germ., 109, 683 Hamilton P
Stolz, Herbert Rowell : Redlands, Phyl., 42, 222 Kingsley
Stone, Alta Dorthula : Tropico, Phys., 42, 611 Waverly P
Stover, Roy Bales : San Diego, Law, 68, 122 Encina
Strachan, Nina Margaret : Palo Alto, Zool., 11, 422 Tasso P
Streeter, Olive Louisa : Cupertino, Hist., 105, 29 Roble
Streeter, Richard Summers : Cupertino, C. E., 46, 172 Encina
Strong, Charles Arthur : Palo Alto, C E., 111, 76 Encina
[2]Strong, Malcolm W. : Plainfield, N. J., Engl., Beta Theta Pi
Stuart, Mary Virginia : Redlands, Math., 10, La Camaraderie
Sturla, Rose Florence : Mountain View, Hist., 36, Mt. View M
Suits, Charlotte Bell : Santa Monica, Engl. gr., 42 Roble
A. B., Stanford, 1908.
Sutliff, Helene Barnard : Sacramento, Engl., 6, La Camaraderie
Sutliff, Nina Dinsmore : Sacramento, Zool., 11, Madroño
[2]Swafford, Henry Watson : Oakland, Econ., S. A. Epsilon
Swart, Frank : New Paris, Ind., Law gr., 902 Bryant P
A. B., Stanford, 1907.
Sweet, Shirley Glidden : Elbridge, N. Y., Econ., 68, P. Gamma Delta
Swickard, James Blaine : Edenvale, C. E., 45, 43 Encina
Swift, Ernest John : Santa Cruz, Law sp., 81, Kappa Sigma
Swift, May Viola : Montecito, Math., 75, 7 Lasuen
Swift, Ruth : Santa Cruz, Germ., 108, 459 Channing P
Swift, Vega : Santa Cruz, Engl., 111, 459 Channing P
Swigart, Clyde Arthur : San Francisco, C. E., 17, 776 S 2d, S J, S
Symonds, Bessie Marjorie : San Jose, Phyl., 76, 194 Webster, SJ, S
Tabor, Clarence Edward : Eureka, C. E., 9, Encina
[1]Taft, Harris Welch : Santa Monica, Law gr., 162 Encina
A. B., Stanford, 1908.
Taggart, Arthur Fay : Palo Alto, Geol., 78, 21 Lasuen
Taggart, James Deacon : Los Angeles, E. E., 79, 75 Encina
[2]Talbot, Sterling John : Pasadena, Grk., 13, 193 Encina
Talboy, Archibald Carlisle : Palo Alto, Law, 11, 311 Middlefield P
Talboy, Lena Celesta : Palo Alto, Engl., 8, 311 Middlefield P

Talboy, Robert E. : Palo Alto, Law, 3, 311 Middlefield P
Tallant, Charles Harold : Santa Barbara, E. E., 14, 83 Encina
Tallant, Edward Percy : Santa Barbara, E. E., 74, 83 Encina
[2]Tate, Harriette Durant : Altadena, Lat., 1 Alvarado
[1]Taylor, Alice : Palo Alto, Math., 2, 567 Forest P
Taylor, Arthur : Los Angeles, C E., 11, Phi Delta Theta
Taylor, Cary Pebbles : Chico, E. E., 43, 88 Encina
Taylor, Charles Chappell : Selma, C E., 6, Encina
Taylor, Louis John : Los Angeles, C. E., 16, 70 Encina
[1]Taylor, Nain : Los Angeles, Engl. gr., 15 Madroño
A. B., Stanford, 1907.
Taylor, Nelson : Los Angeles, C E. sp., 37, P. D. Theta
Tays, James Anthony : Ontario, Chem., 111, 115 Encina
Telfer, William Jack : San Jose, Law, 57, Encina
Temple, Milo Kellner : San Francisco, Law sp., 11, 207 Hawthorne
Templeton, Eugene Crittenden : Palo Alto, Geol., 38, 435 Hamilton P
Terrill, Chester Charles : San Francisco, C E., 69, Kappa Alpha
Theile, William Christian : Stanford Univ. Law, 84, Delta Upsilon
[1]Thoburn, Helen : Palo Alto, Germ. gr., G. Phi Beta
A. B., Stanford, 1908.
Thomas, Gertrude M. : Centerville, S. Dak. Lat., 103, College Terrace
A. B., Leander Clark College, 1903.
Thomas, Henrietta Gilstrop : Woodland, Grk., 87, 21 Madroño
Thomas, Iva : South Pasadena, Lat., 74, 928 Waverly P
[1]Thomas, William Henry : Palo Alto, C E., 33, 20 Encina
Thomison, Joel D. : Fayetteville, Tenn., Law, 46, Sigma Chi
Thompson, Alexander M. : Seattle, Wash., Law, 72, College Terrace
Thompson, Della : Whittier, Lat., 69, Pi Beta Phi
Thompson, Elizabeth : Palo Alto, Engl., 57, 635 Waverly P
Thompson, Ewing Charles : Lewiston, Id., C E., 66, 2 Encina
Thompson, Hannah Trainer : Pasadena, Germ., 44, 19 Roble
Thompson, Harold W. : Portland, Ore. Germ., 38, Theta Delta Chi
Thompson, James Ernest : San Jose, Law, 12, Seybolt Club
Thompson, John Ibbotson : Pueblo, Colo., M. E., 74, College Terrace
Thornely, Genevieve H. : Tacoma, Wash., Engl., 81, Delta Gamma
[1]Thorpe, Charles Alfred : Ioamosa, Math., 38, Beta Theta Pi
Thurmond, Blanche Amelia : Carpenteria, Germ., 42, 70 Roble
Thurmond, Hugh Gwyn : Carpenteria, C. E., 12, 143 Encina
[2]Tiedemann, Tudor H. Alex. : Alameda, Hist., Phi Kappa Psi
[2]Tittle, Ward Clark : Guinda, Law, 16 Salvatierra

Todd, Laura : Oakland, Germ., 13, 2 Madroño
Todd, Monette Osie : Riverside, Hist., 44, 56 Roble
Todd, Ward Waldo : Santa Barbara, Phyl., 47, Chi Psi
Tomasini, Almo : Suisun, C E., 45, 4 Lasuen
[2]Tomlin, Vena Marvella : Palo Alto, Engl. †, 342 High P
Topham, James Scott : Washington, D. C., C. E. sp., 12, Pine Cottage
Topp, Roger : Stanford University, M. E., 108, D K. Epsilon
Tower, Mary Sherburne : San Jose, Germ., 74, San Jose, S
Towne, Gardner Bowers : Palo Alto, Econ., 9, 1005 Bryant P
[1]Towner, Francis Asbury : San Jose, Law sp., 721 Emory, S J, S
[1]Toy, Susie Maude : Santa Maria, Educ., 359 Emerson P
Tracy, Helen Morey : Pasadena, Engl., 102, 10 Roble
Tracy, Howard Sloane : Los Angeles, Law, 9, College Terrace
Tucker, Mary Frances : Los Angeles, Engl. gr., College Terrace
A. B., Stanford, 1899.
Tucker, William H. : Columbus Junc., Ia., Law, 112, 77 Encina
Tully, Genevieve Morton : San Jose, Engl., 12, 346 N 7th, S J, S
Tully, John : San Jose, Law, 45, 346 N 7th, S J, S
Tupper, Charles Ralph : San Jose, C. E., 13, 211 S 8th, S J, S
Tupper, James Tullius : Fresno, Law, 64, Sigma Chi
Turner, Frank Warren : Stanford Univ., Geol. sp., 101, S. A. Epsilon
*Turner, Maude Elizabeth : Ukiah, Lat. gr., Manteista
A. B., Stanford, 1907.
Turner, Ruth Thompson : Needles, Germ., 10, Alpha Phi
Turner, Thomas Norton : Needles, Geol., 11, S. A. Epsilon
[1]Tuttle, Albert Leon : Stanford University, Geol., 9, College Terrace
Tuttle, John Raymond : Stanford Univ., Hist., 76, Cardinal Club
[1]Twohy, James Francis : San Jose, Econ., San Jose, S
Twombley, Harriet Elizabeth : Palo Alto, Phyl., 101, 850 Ramona P
Tyson, Blakely M. : Brooklyn, N. Y., Geol., Sigma Alpha Epsilon
Upson, Burchell Williams : Sacramento, C E., 45, D. K. Epsilon
Upson, Marion : Sacramento, Math., 8, K. Kappa Gamma
Utter, Ben Watkins : Sacramento, Law, 42, 173 Encina
Utzinger, Otto Emile : Astoria, Ore., C E., 43, College Terrace
Vail, Alida : San Francisco, Hist., 74, Alpha Phi
[1]Vail, Stanley Marshall : San Francisco, Econ., 85, Phi Kappa Psi
Valentine, Percy Friars : Sacramento, Econ., 65, Sigma Nu
[2]Vanatta, Leon Paul : San Francisco, E. E., 17, 81 Encina
Van Campen, Frank Rumsey : Palo Alto, Geol., 50, 21 Lasuen

* Died, February 1, 1908.

Vance, Alva Richards : Madera, Econ., 23, 431 Kipling P
Vandervoort, Theodore, Jr. : Palo Alto, Geol., 70, 519 Webster P
Van Epps, Carolyn Mae : Palo Alto, Draw., 75, 627 Channing P
Van Etten, Percy Hixon : Palo Alto, M. E., 64, 465 Hawthorne
Van Sicklen, Wm. J. : Hutchinson, Minn., Chem., 58, 5 Lasuen
Van Slyck, Kenneth : El Paso, Texas, E. E., 17, College Terrace
Van Zwalenburg, Mabel E. : Riverside, Phyl., 45, 22 Roble
Vestal, Maxwell : San Jose, E. E., 128, 875 N 12th, SJ, S
[2]Viall, Benjamin Thomas : Los Angeles, E.E. gr., 542 Cowper P
A. B., Stanford, 1900.
Vincent, Vita Grace : Oakland, Ent., 37, K. A. Theta
Visel, Jack Angele : Santa Ana, Econ., 16, Kappa Alpha
Vose, Clarence Hoy : Los Angeles, Law, 45, 67 Encina
Wada, Meitoku : Palo Alto, Econ. sp., 12, 656 Chan'g P
Wade, Benjamin Franklin : Long Beach, C E.†, 12, Phi Delta Theta
[2]Wade, George Willis, Waupaca, Wis., C. E. sp, 359 Emerson P
Wade, Gustav : Naples, F. E. sp., 15, Cardinal Club
Wadsworth, James Milton : Palo Alto, C. E., 51, 249 Kipling P
Walbridge, Lester Sinclair : Los Angeles, Grk., 97, Beta Theta Pi
[1]Waldron, Grace W. : Pasadena, Zool., 11, 40 Roble
Walker, Charles Glenn : Monrovia, C. E., 14, 33 Encina
Walker, David Henry, Jr. : San Francisco, M. E., 49, 82 Encina
[2]Walker, Richard W. : Glenn Moore, Pa., Phys. gr., 450 University P
C. E., Lehigh University, 1884.
Walker, William Moore : Los Angeles, Law, 101, Delta Upsilon
Wallace, Annie Blanche : Los Angeles, Lat., 59, 63 Roble
Wallace, Ethel : Visalia, Hist., 105, K. K. Gamma
Wallace, Guy : Redlands, Chem., 71, 9a Salvatierra
Ward, Helen McPherson : San Diego, Engl., 102, Manteista
[1]Ward, Terry Wilson : Merced, Law, 28, 142 Encina
[1]Ward, Wendell William : Los Angeles, Law gr., Encina
A. B., Stanford, 1907.
[2]Ware, Cassandra Maxon : Paducah, Ky., Frn., 559 Cowper P
Waring, Clarence Almon : Mayfield, Geol., 13, College Terrace
[1]Warlow, Chester Harvey : Fresno, Law, 24, Sigma Chi
Warmoth, Lenna Jane : Berkeley, Math., 111, Manteista
Warren, Edwin Vincent : Pacific Grove, Zool. sp., 105, 626 Homer P
Warren, Herbert Clifton : Glendora, M. E., 48, 154 Encina
Warrick, George Fred : Santa Monica, E. E., Evergreen Park
Warrior, Mabel : Palo Alto, Draw., 52, Evergreen Pk. P
Warthorst, Bertha Lydia : Bakersfield, Math., 10, 29 Roble

Waterman, Herbert Alton : San Jose, C. E., 15, Stanford Inn
Watkins, Zoe Lucile : Kingman, Arizona, Hist., 41, 18 Roble
Watson, Paul Robert : San Diego, C. E., 74, 120 Encina
Watters, Ethel Madelaine : Santa Cruz, Phyl., 77, 2 Salvatierra
[2]Waugh, Clarence W, : Brooklyn, N. Y. Phyl., 2, 21 Lasuen
Weaver, Elmer Rupel : Glendora, Chem., 74, Welakahao
Weaver, Emma Angeline : San Jose, Engl., 72, 141 Lupton, SJ, S
[2]Weaver, Stuart Eldridge : Palo Alto, M. E., 13, 335 Bryant P
Webb, Raymond Prescott : Los Angles, C. E.†, 17, 196 Encina
Webber, Burpee Ogilvie : Santa Cruz, C. E., 107, 93 Encina
Webber, Marjorie : Alameda, Hist., 23, 68 Roble
Weills, Grace Virginia : Palo Alto, Hist., 41, 58 Roble
Weills, Mary Ruby : Palo Alto, Math., 23, 59 Roble
[1]Weissbach, Gladys Pauline : Palo Alto, Germ., 412 Everett P
Weitbrecht, George : St. Paul, Minn., Phyl., 4, 5 Lasuen
Wells, Albert Huntington : Emeryville, Chem., 16, 635 Bryant P
Wells, George Rowley : Santa Ana, C. E., 67, 136 Encina
Wells, James Bertrand : Palo Alto, C. E., 13, 365 Guinda P
Wendling, Bessie Lee : Los Angeles, Lat., 69, Pi Beta Phi
Wenk, Morris : Stockton, E. E., 56, Chaffee Club
Wessels, George Merlin : Angels Camp, M. E., 9, Presby. Church P
Weston, John Charles : Los Angeles, Hist., 34, D. K. Epsilon
Westwick, Alice Eliza : Santa Barbara, Germ, 12, 2 Salvatierra
Westwick, Robert C. : Santa Barbara, C. E., 68, 25 Encina
Wetmore, Clyde T. : San Jose, Phyl., 43, Welakahao
Weymouth, Frank Walter: Tacoma, Wash., Zool., 80, 32 Encina
Wheaton, Crumbie Carl : Palo Alto, Law, 15, 742 Bryant P
Wheeler, Raymond Bert : Pasadena, Engl., 7, Beta Theta Pi
Wheeler, Ward Huey : Los Gatos, Law gr., 22, Acacia
B. S., Cornell College, 1906.
[1]Wheeler, Wm. W., Jr. : St. Joseph, Mo., Econ., Theta Delta Chi
White, Hazel Maude : Los Angeles, Hist.†, 30, K. A. Theta
White, Helen : Alameda, Hist., 11, K. K. Gamma
White, Henry Austin : Honolulu, T. H., C. E., 36, Chi Psi
White, Herbert Eustace : Sacramento, Law, 11, 170 Encina
White, John Blackwood : Spokane, Wash Hist., 67, Phi Kappa Psi
White, Walter Noy : Los Angeles, C. E. sp., 50, 112 Univ. P
Whitley, Ross Emmett : Hollywood, Hist., 10, Zeta Psi
[1]Whitmire, Ethel Dorothy : San Jose . Lat. gr, San Jose, S
A. B., Stanford, 1907.
Whittemore, Jay R. : Salt Lake City, U., Law, 8, Phi Kappa Psi

Wiggins, John Henry : Bennings, D. C., C. E.,, 24, 142 Encina
[2]Wilde, Frank L. : Dobbs Ferry, N. Y., Geol., 24, Sigma Chi
[2]Wilde, Herbert R. : Dobbs Ferry, N. Y., E. E., 82, Sigma Chi
Wiley, Florence Denio : Los Angeles, Draw., 13, Alpha Phi
Wiley, Korah Belle : Palo Alto, Germ., 11, 337 Hamilton P
Wilkins, Edith Amelia : Bolinas, Bot., 8, 62 Roble
Wilkins, Helen Morse : Bolinas, Engl., 88, 62 Roble
Willard, John D : Palo Alto, Law sp., 7, 808 Waverly P
Williams, Charles Floyd : Whittier, Law, 9, 16 Salvatierra
Williams, Florence : Hollywood, Bot., 12, 6 Roble
Williams, Francis Xavier : San Francisco. Ent., 120, 1015 Scott, S F, S
A. B., St. Ignatius College, 1903.
[1]Williams, Herbert Chester : Compton, C. E., 531 Cowper P
Williams, Laurence Davis : Yuba City, C E., 12, 207 Hawthorne P
Williams, Mary Wilhelmine : Palo Alto. Hist. gr., 459 Channing P
A. B., Stanford, 1907.
[2]Williamson, Benjamin Franklin : Lindsay. Lat. gr., 135 Everett P
A. B., Allegheny College, 1903.
[2]Wilson, Chris : Los Angeles, Law, 5 Lasuen
[2]Williamson, William Roy : Los Angeles, Geol. sp., Kappa Alpha
Wilson, Clarence John Ramsey : Anaheim, C. E., 20, 515 Waverly P
Wilson, Emma-Jean : Los Angeles, Lat., 107, 15 Salvatierra
Wilson, Francis Goodspeed : Santa Cruz, Econ. sp., 23, Kappa Sigma
[1]Wilson, Horace Sandes : Los Angeles, Law, 70, Sigma Nu
Wilson, James Franklin : Little Rock, Ark. C. E., 199 Encina
Wilson, Marguerite : Oakland, Hist., 9, 8 Roble
Wilson, Walter Gibson : Leicester, Mass., C. E.†, 10, 5 Lasuen
[1]Wilson, William Webster : Los Angeles, E.E., gr., 11 Encina
A. B., Stanford, 1908.
Wiltz, Bertha Amelia : San Jose, Phyl gr., 532 Homer P
A. B., Stanford, 1908.
Wiltz, Lena G. : San Jose, Draw., 44, 532 Homer P
[1]Wingate, Oliver Eugene : Durango, Col., C E.†, 5, Phi Kappa Psi
[2]Winninger, Marguerita : San Jose, Hist., 22 Lasuen
[1]Winter, Arthur Leafland : Ione, Phyl., 26, 235 Emerson P
Winters, Verne William : Spokane, Wash., M. E., 15, Phi Delta Theta
Wirt, William : Santa Rosa, Hist. gr., Menlo Park M
A. B., Stanford, 1908.
Withers, Myra : Lincoln, Nebr., Germ.†, 5, 40 Roble
Witmer, Roy Cook : Pasadena, Econ., 3, Kappa Sigma
Wolff, Franklin Fowler : San Fernando, Math., 8, 523 Cowper P

[2]Wolverton, Therow : Los Angeles, Law, 334 Cowper P
Wondries, Charles Henry : Los Angeles, C. E., 98, 67 Encina
Wood, Dallas England : Merced, Law, 104, Theta Delta Chi
Wood, Frederick Bertram : Palo Alto, Engl., 48, 913 Emerson P
[2]Wood, Galen Arthur: East Smithfield, Pa., C. E.†, 359 Emerson P
Wood, George William : Santa Cruz, Econ., 35, 147 Encina
[1]Wood, Harold Ira : San Francisco, C. E., 6, 620 Waverly P
Wood, Mamie Etta : Whittier, Engl., 14, 542 Cowper P
Wood, Mildred Tiffany : San Jose, Hist., 52, 531 Cowper P
Woodard, John Daniel : Yolo, Econ., 67, 126 Encina
[1]Woodbury, James S. : Carson City, Nev., Econ., 9, Phi Kappa Psi
Woodcock, Elbert Cecil : Portland, Ore., E.E., 13, Welakahao
[2]Woodnutt, Lloyd Hale : Seattle, Wn., Geol., P. G. Delta
Woods, Armond Harry : Stockton, Law, 16 Salvatierra
Woods, Ruby Claire : Long Beach, Germ., 64, 317 Emerson P
Woodville, Robert : Bay City, Law, 9, S. Alpha Epsilon
Woolwine, Clare Wharton : Los Angeles, Econ. sp., Phi Delta Theta
Worsley, Ralph Harlow : Stanford Univ., Bot., 12, Acacia
Wright, Adaline : Pasadena, Germ., 42, K. K. Gamma
[1]Wright, Alfred : Los Angeles, Law, 28, Zeta Psi
Wright, Cleveland, Ross : Elko, Nev., Law, 36, Delta Tau Delta
Wright, Elizabeth Agnes: Plymouth, Mass., Germ., 105, 611 Waverly P
Wright, Hugh : El Paso, Texas, C.E., 27, Phi Kappa Psi
Wright, Katharine Hayes : Banning, Lat., 39, 69 Roble
Wright, Lester Augustus : San Diego, C. E. Phi Kappa Psi
Wyman, William McKee : Santa Barbara, Law, 6, Theta Delta Chi
Yasuda, John Katsukichi : Tokyo, Japan. Econ., 102, Japanese Club
[1]Yeater, Laurence Kenneth : Belmont, Geol.†, 6, Belmont B
Yorke, Edwina : Sacramento, Engl. gr., Madroño
A. B., Stanford, 1907.
Yoshida, Kei ichi : Fukuoka, Japan, E.E., 76, 217 Encina
Youker, Malcolm Phillip : Santa Rosa, C.E., 37, 249 Kipling P
Young, Albert Loftus : San Francisco, Econ., 61, P. Gamma Delta
Young, Clarence R. : Eureka, C.E., 52, Kappa Sigma
Young, Hayes Wilson : Mojave, Geol., 32, College Terrace
Young, John Arthur : Los Angeles, M.E., 69, 193 Encina
[1]Young, William Thomas : Fort Jones, Phyl. gr., Theta Delta Chi
A. B., Stanford, 1907.
Zacharias, Wilbur Willard : Westley, C.E., 32, 8 Encina
[2]Zschokke, Irma Julia : Palo Alto, Hist., 110, Madroño

SUMMER REGISTRATION, 1907

Field Geology

Beckwith, Henry Truman
Chandler, Clayton Isaac
Dudley, Ernest Griswold
Ferguson, Claude
Gay, Leslie Rowell
Henderson, Charles William
Herold, Stanley Carrollton
Higley, Wynter Blain
Hughes, Arthur Dickinson
Jameson, Joy Gilbert
Koerner, William
Luhrs, Arthur Cleveland
Mathewson, Arthur Adelbert
McDaniel, George William
Ochsner, Washington Henry
Pemberton, John Rothwell
Prescott, Basil
Randall, Charles Alfred
Rhyne, Momer
Ross, Harry Scott
Severy, Clarence Luther
Soper, Edgar Kirke
Starnes, Xaver Brand
Steel, Donald

Marine Biological Laboratory

I. Occupying Investigators' Rooms

Cannon, William Austin, Ph. D., Desert Botanical Laboratory, Tucson, Arizona.

Hyde, Ida Henrietta, Ph. D., Professor of Physiology, University of Kansas.

Taking Regular Courses

Barneson, John Leslie : Redwood H. S.
Beeger, Gertrude Margaret
Echlow, William Wallace
Binder, Hazel Mignon
Bodley, Grace Majella
Bolin, John Siegfried
Britton, Raymond Morris
Brooke, Banner Raymond
Burbank, Daniel Wellman
Burritt, Elizabeth Sophia
Coe, George Clifford
Coolidge, Grace Burr
Cox, Anna Shipley
Dillon, James Root
Fobes, Katharine F.
Gartzmann, Pauline
Gerlach, Percy Adelbert
Hardison, Hope : Santa Paula H. S.
Harris, Miriam Alice
Hutchins, Alice Agnes
Jones, Leona Lyle : Harker School
Leib, Earl Warren : Washburn School
Lisser, Hans, A. B., Univ California
Long, Royce Reed
Lord, Wilma Grace
McCann, Robert James : Washburn School
McMurphy, James Ira Wilson
McPheeters, George Carl

Meyers, Alfred E.
Montgomery, Orland F.
Nelson, Ina May
Osborn, Mabelle Frances
Patterson, Alice Mabel
Prien, Eda Caroline : Mills College
Reining, Charles
Rose, Jessie Perkins
Rowe, Ethel Elizabeth
Schwabacher, Samuel Isaac
Sheldon, Edwin Rowley
Shelton, James Errett
Shelton, William Cortez
Smith, Caroline Rowell
Squire, Mary Louise
Stevens, Esther Stuart
Sutliff, Nina Dinsmore : Harker School
Thompson, Elizabeth
Watkins, Mary Martha
Watters, Ethel Madelaine
Wiltz, Bertha Amelia

SUMMARIES

Officers

Trustees		15
Faculty		
Professors	36	
Associate Professors	24	
Assistant Professors	44	
Instructors	34	
Assistants	77	
Lecturers	3	218

Students

Graduates:		
Candidates for Degree of A. M.	19	
Candidates for Degree of Engineer	5	
Candidates for Degree of J. D.	10	
Candidates for Degree of Ph. D.	4	
Not Candidates for Advanced Degrees	88	126
Undergraduates		1513
Special Students		99
Total		1738
Summer Registration	75	
Less names already counted	62	13
Total (including Summer Registration)		1751

By Major Subjects

	GRADUATE	UNDER-GRADUATE	SPECIAL	TOTAL
Greek	3	16	—	19
Latin	11	43	—	54
Germanic Languages	10	81	1	92
Romanic Languages	—	18	2	20
English	13	157	7	177
Psychology	1	3	—	4
Philosophy	2	—	—	2
Education	4	20	2	26
History	16	124	3	143
Economics and Social Science	3	118	10	131
Law	26	251	18	295
Drawing	2	28	1	31
Mathematics	4	29	1	34
Physics	3	9	1	13
Chemistry	5	76	2	83
Botany	2	28	1	31
Physiology and Histology	4	46	3	53
Zoology	3	22	3	28
Entomology	3	7	1	11
Geology and Mining	5	106	12	123
Civil Engineering	1	166	18	185
Mechanical Engineering	—	62	4	66
Electrical Engineering	5	103	9	117

By Residence

California	1438	Kansas	6	Maryland	2
Washington	41	Minnesota	6	New Jersey	2
Oregon	38	Missouri	6	New Mexico	2
Illinois	16	Pennsylvania	6	Arkansas	1
Arizona	14	Idaho	5	Australia	1
Colorado	13	Massachusetts	5	Bermuda Islands	1
New York	13	Wisconsin	5	Italy	1
Utah	12	Canada	3	Maine	1
Indiana	10	China	3	Mexico	1
Iowa	10	Dist. of Columbia	3	Mississippi	1
Hawaii	9	Michigan	3	New Hampshire	1
Japan	9	South Dakota	3	North Carolina	1
Montana	9	Tennessee	3	Switzerland	1
Nebraska	8	Texas	3	Vermont	1
Nevada	8	Connecticut	2	Wyoming	1
Ohio	8	Kentucky	2		

DEGREES CONFERRED

May 22, 1907, *September 6, 1907, †January 10, 1908

BACHELOR OF ARTS

GREEK

Avis Katherine Smith.

LATIN

†Mary Alice Balsbaugh
†Ethel May Crandell
Lillian Mildred Goodspeed
†Karoline Silliman Hammond
†Edna Marie Hansen
Bessie Belle Hoag
Ada Hosford
Bertha Taylor Lamborn
Maud May Lipscombe
Katharine Lummis
Paul Everett Millar
Hazel Irene Moise
Helen Neville Pepper
Berdella Price
Florence May Sevier
Esther Jean Spencer
Jessie Shirlaw Thayer
Maude Elizabeth Turner
Ethel Dorothy Whitmire

GERMANIC LANGUAGES

†Bertha Coville Bailey
†Callie Hildred Bates
Ethel Grace Beard
†Gertrude Margaret Beeger
*William Wallace Behlow
Harvey Peter Bittner
Florence Bolton
*Banner Raymond Brooke
Claribel Bryant
†Anna Julia Ehrnbeck
Roby Theresa Elwood
Shirley Marie Hopper
Edith McGeorge
Adele Meyer
Iva Myrtle Miller
†Anna Rae Mills
†Edith Harriet Moore
Herman Peters
Edgar Stillman
†Helen Thoburn

ROMANIC LANGUAGES

Laura Ruth Adkinson
Ina Grace Bothwell
May Franklin
†Emma Florette Hodgdon
Clarice Sara Moise
Claire Minne Perry
†Caroline Rowell Smith
Mildred Smith

ENGLISH

Rosa Edith Bell
†Anna Matilda Bille
Bertha Burnham Bootes
†Mildred Irene Crosier
Grace Beatrice Dorn
Thaddeus Avery DuFlon
†Pearle Marie Eckstein
Charles Lester Geer
†Georgina Walker Gilbert
Julie Augusta Gude
Elamae Lambert
Georgina Lyman
Elizabeth Logan Officer
Calla Claire Pedlar
Beatrice Genevieve Philippi
Alice May Robbins
†Esther Stuart Stevens
†Charlotte Belle Suits
Muriel Charlena Taft
Nain Taylor
Noah S. Yoder
Edwina Yorke

PSYCHOLOGY

†Chilton Hampton
Raymond Chester Menker

EDUCATION

Samuel Windsor Brown
Mary Persis Holman
James Walter Myers

HISTORY

Ben Shannon Allen
Roscoe James Anderson
†Herbert Theodore Blood
*Grace Majella Bodley
*Raymond Morris Britton
Inez Center
†Letitia Macelia Clark
Denison Halley Clift
Katherine Cox
†Elizabeth Julia Crumby
Grace McMillan Gilbert
Grace Louise James
Edith Louise Jarman
Taiji Kawai
†Rowland Sherman Lacey
Jessie Duff McGilvray
Louise Norvell
Elise Dorrance Owen
Tallahatchie Pettingill
Anna Polson
Harold Fred Smith
Wendell William Ward
Mary Wilhelmine Williams
†William Wirt

ECONOMICS AND SOCIAL SCIENCE

†Shohachi Anju
William Alfred Beattie
†Prentis Townsend Burtis
John Knowles Dotten
Florence Foy
Yamato Ichihashi
Katsuji Inahara
Kinsun Ke
Stuart Sawyer Smith
Fred Zimmerman

LAW

*Irving Charles Ackerman
Clarence Goodrich Atwood
Chester Alexander Ball
William Archy Campbell
Willard Glidden Cram
Clay Russell Crider
Edward Anthony Cunha
Harry Parker Daily
LeRoy Mallory Edwards
Frank Alma Fisher
Irving Deane Gibson
†Frank Lloyd Hill
Henry Garfield Jorgensen
Henry Clay Kelly
Guy Knupp
John Cobb Macfarland
George Curtis Mansfield
John Albert Merrill
†John Shepard Mitchell
Harry Elliott Pickett
Earl Harriman Pier
George Joseph Presley
Stuart McFarland Salisbury
George Franklin Shaner
Chester Silent
†Margery Bruen Stallcup
Frank Swart
†Harris Welch Taft
Waldo Egerton Turner
John McCartney Ward
Max Wassman, Jr.

DRAWING

Estelle Thompson
Mercelia Anna Winslow

MATHEMATICS

†Albert Edward Caswell
*Bertha May Fosdick
Sadie Lois Gilmore
Alice Nagel McDowell
Johanna Lelia Poage
Lucy Adeline Robinson

PHYSICS

Wendell Prescott Roop

CHEMISTRY

William George Bateman
William Edmund Burke
†Charles Yorke Douglass
Arthur Francis Gilman
Dennis Robert Hoagland
†Katherine Foster Loeser
†Ina May Nelson
Hananiah Hugh Ross
Hazel Wood Severy
Nathan Emery Shutt
Alfred Loomis Taylor

BOTANY

Florence Schneider Angwin
Richard Morris Holman
Shigeroku Nohara
†Alice Mabel Patterson
William Oliver Stuntz

PHYSIOLOGY AND HISTOLOGY

†Isaac Dillon
†James Root Dillon
Samuel Robert Downing
Miriam Stedman Grau
Warren Truett McNeil
†Alfred E. Meyers
Louise Pearce
Dexter Newell Richards
Arthur Rosenfeld
Howard Edwin Ruggles
†Mary Louise Squire
Ellen Smith Stadtmüller
†Bertha Amelia Wiltz
Harry Alphonso Wyckoff
William Thomas Young

ZOOLOGY

Charles Victor Burke
†William Flagg Derby
Charlotte Elliott
Hubert Oliver Jenkins
*Wilma Grace Lord
†Margaret Ogier
James Norris Proctor

GEOLOGY AND MINING

†Henry Truman Beckwith
Roy Noble Ferguson
Robert Breck Moran
Benjamin Rankin Saunders
Dale Slusher
Victor Hugo Wilhelm

CIVIL ENGINEERING

Ralph Augustus Beebe
Noel S. Burge
Myron Carlos Burr
James Leonard Dunne
William Watkyn Edwards
William Styles Fay
Henri Reginald Gardner
Valentine Richard Garfias
†Charles Moser
Stuart Moser
James Druillard Patterson
Arthur Miller Porter
Harry King Savage
Frank Brown Sinnock
Edgar C. Smith
Frank Carter Squire

MECHANICAL ENGINEERING

Carl Franklin Braun
Fumiya Nakayama
Charles Hugh Paxton
Robert Risdon Pratt

ELECTRICAL ENGINEERING

Everett Royal Cottle
Warren A. Davis
William Leavenworth Durand
Cyril Frank Elwell
Carl Augustus Ferguson
†Walter Haynes
William Craig Paine
Frank McIntosh Redman
Daniel Louis Schaaf
Lewis William Sowles
George Armstrong Tarbell
Charles Edgar Spaulding

Ralph Allen Hopkins
†Masaki Kawara
Ralph Berkeley Mathews
Halbert Ray Thomas
†William Webster Wilson
Robert S. Woods

BACHELOR OF LAWS

George Levin Aynesworth
Rush Maxwell Blodget
Dian Rathbun Gardner
Alexander Deuchar Larnach
†Thomas Edgar Robinson

MASTER OF ARTS

GREEK

*Rose Hohfeld
A.B., University of California.
†Francis Clark Murgotten, A.B.

LATIN

Rachel Rose Hiller, A.B.

ROMANIC LANGUAGES

Lillian Gertrude Fleisher
B.L., University of California.
†Edwin Hume Skinner, A.B.

ENGLISH

*Catherine Leota Fields, A.B.
Louise Kate Fleming, A.B.
Walter Yeeling Wentz, A.B.

HISTORY

*Edwin Francis Dyer
A.B., Indiana University.

GEOLOGY AND MINING

Rhoderic Crandall, A.B.
Solon Shedd, A.B.

JURIS DOCTOR

†James Roy Choate, A.B.
Earl Lamb, A.B.
†Donald Kingsland Seibert, A.B.

DOCTOR OF PHILOSOPHY

CHEMISTRY

†William Draper Harkins, A.B.

BOTANY

Harry Baker Humphrey
B.S., University of Minnesota.

ENTOMOLOGY

†Mary Isabel McCracken, A.M.

THE MEMORIAL CHURCH

The Rev. David Charles Gardner, Chaplain.

Godfrey Carl Buehrer, Organist.

During 1907-08 the services of the Memorial Church have been held in the University Chapel Sunday mornings at 11 o'clock, and Vespers Thursday evenings at 7 o'clock.

University Preachers, 1907-08

Archdeacon Stuck (Episcopal), Alaska.

The Rt. Rev. William F. Moreland (Episcopal), Sacramento.

The Rev. H. H. Gowen (Episcopal), Seattle.

The Rev. Norman Guthrie (Episcopal), Alameda.

The Rev. George W. White, D.D. (Methodist), Oakland.

The Rabbi Jacob Voorsanger, D.D., San Francisco.

The Rev. Burt Estes Howard (Unitarian), Los Angeles.

The Rev. C. H. Lathrop (Unitarian), Berkeley.

The Rev. Bradford Leavitt (Unitarian), San Francisco.

The Rev. Jenkins Lloyd Jones (Unitarian), Chicago.

The Rev. W. H. Day (Congregational), Los Angeles.

President John Willis Baer, LL.D. (Presbyterian), Occidental College.

The Rev. James W. Strong (Congregational), Northfield, Minn.

The Rev. H. H. Bell (Presbyterian).

The Rev. George Burlingame (Baptist), San Francisco.

President William H. P. Faunce, LL.D. (Baptist), Brown University.

The Rev. H. J. Vosburgh (Baptist), Oakland.

LECTURES, RECITALS, DEBATES, ETC.

Before the University

Professor T. Griffiths Taylor, University of Sydney—*The Great Barrier Reef of Australia.*

Consul General George Horton, United States Consular Service—*The Greeks of Today.*

Professor George James Peirce—*Influence of Smelter Fumes on Vegetation.*

Professor David G. Hogarth, American Archæological Association—*Ionia and Ephesus.*

Mr. Alexander Welin, London—*Life-Saving Appliances at Sea.*

President Joseph Swain, Swarthmore College.

Dr. Wincenty Lutoslawski, University of Krakow, Austria—(1) *Training of Mind and Body;* (2) *Poland.*

Dr. Rudolph Leonhard, University of Breslau—*The Social Tendencies in Present German Legislation.*

Dr. Rupert Blue and Dr. W. C. Rucker, United States Sanitary Service—*The Bubonic Plague.*

Under the Auspices of the Christian Associations

Mr. J. Lovell Murrey, of New York—*The Awakening of the Orient.*

Mr. Payson Jackson Treat—*The History of Japan.*

President David Starr Jordan—*The Charms of Japan.*

Musical Recitals, Etc.

1. Concert by Miss Maud Powell.
2. Presentation of *The College Widower,* by Sword and Sandals.
3. Concert by The Kilties Band.
4. Concert by The Stanford Combined Musical Clubs.
5. Concert by Jan Kubelik, assisted by Mlle. Bertha Roy.
6. Presentation of Henry Arthur Jones's *The Manœuvres of Jane,* by the Sophomore Class.
7. Concert by Ignace Paderewski.
8. Concert by The Columbia Park Boys' Club.

University Assemblies

1. Vice-President Charles Warren Fairbanks, Washington, D. C.; Governor James G. Gillett, Sacramento.

2. President David Starr Jordan—*Australia;* Mr. Arthur Alban Murphy.

3. Mr. Warren Gregory, San Francisco; Mr. Thomas Magee, San Francisco.

4. President David Starr Jordan—*The Century of Agassiz and Linnæus.*

5. Mr. William T. Reid, Jr., Belmont; Dr. Thomas Marion Williams, '97, Palo Alto.

6. Rev. Sidney B. Snow, Palo Alto; Mr. Reuben B. Hale, San Francisco.

7. Mayor Edward Robeson Taylor, San Francisco—*The Duty of the Scholar to the State.*

8. Mr. Charles H. Bentley, San Francisco; Mr. Benjamin Weed, San Francisco.

9. Mr. Chester H. Rowell, Fresno—*The University Man and Public Opinion.*

10. The Rev. Charles Reynolds Brown, Oakland.

Commencement Addresses—May 22, 1907

Mr. Harris Weinstock, Sacramento—*The Nation's Greatest Need of the Hour.*

President David Starr Jordan—*With No Mark or Brand.*

Intercollegiate Debate

An Intercollegiate Debate, under the auspices of the Associated Students of the University of California and of the Leland Stanford Junior University, is held in April of each year. In 1908 the debate was held at Stanford University.

The question for 1908 was, "Resolved, That trade unions are justified, through the use of all lawful means at their disposal, in insisting upon the closed shop."

The Stanford contestants were: Leslie Craven, Gilbert Dane Ferrell, and James Errett Shelton; Alternate, De Estraye Cassell Boyd.

Carnot Debate

The Carnot Medal, presented by the Baron de Coubertin, for the purpose of encouraging the study and discussion, in California, of French history and politics, is awarded annually to the student who, in the opinion of the judges, proves himself the best debater in a contest held for the purpose between Stanford University and the University of California.

Under the rules of the contest a general subject for the debate was announced November 15, 1907, but the particular phase of the question, as embodied in a resolution, was not made known to the contestants until February 7, 1908, two hours before the time set for debate.

The general subject for 1907-08 was France and Morocco, and the particular question debated was, *"Resolved,* That France should prepare to revert to the Moroccan policy of Delcassé, on the expiration of the Algeciras conventions." The debate was held at Berkeley, February 7, 1908. The contestants were Maurice Edward Harrison, Hubert Don Hoover, Sayre MacNeil, of the University of California; and De Estraye Cassell Boyd, James Errett Shelton, and William Cortez Shelton, of Stanford. The judges were Mr. John P. Irish, Mr. Raphael Weill, and Mr. Alexander McAdie. The medal was awarded to William Cortez Shelton, of Stanford University.

The Bonnheim Ethical Dissertations and Discussion

The purpose of the Bonnheim dissertations and discussion, as defined by the founder, Mr. Albert Bonnheim, of Sacramento, is as follows: "It is not so much desired to obtain new facts or new truths in ethics as it is to place the truth which we now have before as many students as possible, so that they will take greater interest in questions dealing with ethical problems." The competition is open to all undergraduate students of Stanford University, and is divided into two parts:

1. *The Bonnheim Dissertations.*—The general regulations governing the competition are as follows: Each competitor must deposit with the Registrar before the first day of November an essay upon the subject assigned by the committee. The essays must not be signed, but should have some mark of identification and be accompanied by a sealed envelope containing the name of the author. They must be typewritten on thesis paper of regulation size. They should be preceded by an outline and a bibliography, and should have accurate references. No limit of length is prescribed, but a treatment not to exceed ten thousand words is recommended. The judges will announce the names of the four competitors who present the best Bonnheim dissertations, awarding premiums of $70 and $40 to the first and second respectively in order of merit, and to the third and fourth $20 each.

2. *The Bonnheim Discussion.*—The winners of the Bonnheim premiums for dissertations shall be qualified to engage in the discussion, which will be upon the same subject as the dissertations, and which will be held the first or second week in December. The Bonnheim

prize of $100 will be awarded to the speaker who in his discussion of the subject shows the clearest insight and makes the most effective presentation. Each speaker will be allowed twenty minutes.

The general subject for 1907 was "The Ethics of Racial and National Exclusiveness." The judges of the dissertations were Mr. Charles A. Murdock, of San Francisco, Rev. William Kirk Guthrie, of San Francisco, and Professor Henry Waldgrave Stuart; of the discussion, the Rev. Henry Phipps Ross, of Palo Alto, Librarian George Thomas Clark, and Dr. George Holland Sabine. Premiums were awarded to Shohachi Anju, John Noble Carter, and James William Galloway. The Bonnheim prize was won by Shohachi Anju.

The general subject for 1908 is "Ethical Aspects of the Doctrine That Great Commercial Nations Should Maintain Large Navies." The essays are due at the Registrar's Office, October 26. The judges will announce the Bonnheim premiums November 20, and the discussion will take place December 4.

Philological Association

Professor George Hempl, President.
Associate Professor Oliver Martin Johnston, Secretary.

The University Philological Association was organized September 17, 1892, for the purpose of reading and discussing results of scientific investigations in language and literature. The membership consists of the instructors and advanced students in the different language departments in the University. The regular time of meeting is the first Thursday of each academic month, excepting September, January, and May, at 2:30 p. m. The following papers were presented during the calendar year ending March, 1908:

April 11, 1907. Assistant Professor Ernest Whitney Martin—*The Swan Song in Classical Literature.* Mr. E. Dinsmore Curtis—*Roman Monumental Arches.*

October 3. Associate Professor Oliver Martin Johnston—*The Description of the Sultan's Orchard in Floire et Blancheflor.* Assistant Professor Benjamin Oliver Foster—*A Transposition in Propertius.*

November 7. Professor Alphonso Gerald Newcomer—*The Terza Rima in English Verse.* Professor Henry Rushton Fairclough—*Notes on Virgil's Æneid.*

December 5. Assistant Professor Raymond Macdonald Alden—*Songs*

in the Early English Drama. Assistant Professor JEFFERSON ELMORE—*Episode of the Delphic Oracle in Plato's Apology.*

February 6, 1908. Professor GEORGE HEMPL—*Some Old Norse Bracteates.* Assistant Professor WILLIAM DINSMORE BRIGGS—*A Note on the Sources of Ben Jonson's Timber.*

March 19. Professor AUGUSTUS TABER MURRAY—*The Interpretation of Aeschylus' Agamemnon.*

THE SCIENCE ASSOCIATION

Professor EDWARD CURTIS FRANKLIN, President.
Professor FERNANDO SANFORD, Vice-President.
Assistant Professor JOHN OTTERBEIN SNYDER, Secretary.

The Science Association was organized January 17, 1894. Original investigations and papers of general interest on scientific topics are presented from time to time.

The following papers were read before the Association between April, 1907, and April, 1908:

Professor RUFUS LOT GREEN—*Number.*

President DAVID STARR JORDAN—*Science in Australia.*

Associate Professor FRANK MACE MCFARLAND—*The Constitution of the Germ-cell Nuclei.*

Associate Professor GEORGE JAMES PEIRCE—*The Effect of Smelter Fumes on Vegetation.*

Assistant Professor LILLIEN JANE MARTIN—*A Contribution to the Founding and Applying of the Suggestion Method in Normal Psychology.*

Professor LEANDER MILLER HOSKINS—*The Place of Mathematics in the Field of Science.*

SOCIAL SERVICE CLUB

The Rev. D. CHARLES GARDNER, President.
DAVIDA FRENCH, '08, Secretary.
GEORGE BARNARD BUSH, '09, Treasurer.

The STANFORD SOCIAL SERVICE CLUB was organized March 22, 1906, (1) to foster in the life of the University the ideals of social service, (2) to study social problems, social betterment, social settlements, and political science, and (3) to establish eventually a Stanford University Settlement, in San Francisco, and other centers of social work. Several University Assemblies have been held under the auspices of the Club, and in addition papers and addresses have been presented as follows during 1907-08:

President David Starr Jordan—*Social Conditions in Australia.*
Professor Albert Conser Whitaker—*The Banks, the Stock Market, and the Present Financial Stringency.*
Mr. Chester H. Rowell, Fresno—*The Foundation of the Lincoln-Roosevelt League of Republican Clubs.*
Mr. Frank Stone, San Francisco—*Work of the Seaman's Institute.*

LELAND STANFORD JUNIOR MUSEUM

Harry C. Peterson, Curator.
Edwin Alonzo Austin, Assistant Curator.
Bunkichi Shibata, Museum Assistant.
Eugene Garrison McCann, Assistant.

In 1880, Leland Stanford, Junior, then eleven years of age, accompanied his parents on a trip through Europe. Mementoes of the various places visited were purchased, at first with no more serious object than the possession of certain treasures which should recall the pleasures of this European trip. Becoming ambitious to broaden this collection, in 1883, on a second trip to Europe, more extended purchases were made, and with the idea of finally establishing a museum. The Leland Stanford Junior Museum was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the additions to the original collection are mainly her gift to the Museum.

The main building is of Grecian architecture, built of solid concrete, and absolutely fireproof. The cornerstone was laid May 14, 1891, and the museum opened to visitors in 1894. In 1899 and 1905 extensive additions to the original building were completed.

Through the courtesy of Wells, Fargo & Co., all gifts intended for the Museum will be transported free of charge over their lines, in shipments of fifty pounds or less, from railroad points in California, if addressed to the Curator, Leland Stanford Junior Museum, Stanford University, California.

(Owing to damage and disarrangement caused by the earthquake of April 18, 1906, the Museum is at present closed to the public.)

ALUMNI ASSOCIATION

Organized June 15, 1892.

CONSTITUTION

In order to promote the interests of the University, to secure unity among its graduates, and to foster an attachment to our *Alma Mater*, we do hereby constitute ourselves an association to be known as the Alumni Association of the Leland Stanford Junior University.

I. MEMBERSHIP

1. All persons who have received a degree from the Leland Stanford Junior University are members of this Association.

2. All members of the Faculty are honorary members of this Association.

II. OFFICERS

The officers of this Association shall be: (1) a President; (2) one Vice-President from each successive group of five classes (provided that when the last group shall number three classes it shall thereafter be entitled to a Vice-President; (3) a Secretary-Treasurer.

III. DUTIES OF OFFICERS

1. It shall be the duty of the President to preside at all business meetings of the Association, to deliver the President's address on Alumni Day, and to perform such other duties as usually belong to his office.

2. It shall be the duty of the Vice-Presidents, in the order of seniority of their groups, to preside in the absence of the President and to perform the other duties belonging to his office.

3. It shall be the duty of the Secretary-Treasurer to keep accurate minutes of the meetings of the Association and to act as Secretary of the Executive Committee, of which he shall be a member.

4. It shall also be the duty of the Secretary-Treasurer to have charge of the collection and disbursement of the funds of the Association.

5. The Secretary-Treasurer shall be allowed ten per cent of all dues or assessments collected, as compensation for his services.

IV. COMMITTEES

1. There shall be an Executive Committee consisting of the following persons: The Secretary-Treasurer of the Association, and three

other persons chosen by the Association, one of whom shall be designated as Chairman of the Committee.

2. The President shall be ex-officio a member of all Committees.

3. At each annual business meeting the President shall appoint a committee of two persons to audit the Treasurer's accounts.

V. DUTIES OF COMMITTEES

It shall be the duty of the Executive Committee to arrange for the literary programme to be presented on Alumni Day; or any programme for other public occasions; to regulate the finances of the Association; to perform such other duties as may be imposed upon it; and to attend to all business of the Association not otherwise provided for.

VI. ELECTIONS

1. The Officers of the Alumni Association shall be elected by ballot, a majority of all votes cast being necessary for election.

2. The Executive Committee shall be elected by ballot, a majority of all votes cast being necessary for election.

3. The election of officers and of the Executive Committee shall be held on Alumni Day at the annual business meeting.

VII. DUES

1. The dues of the Association shall be one dollar per year for each member thereof. This amount, however, may be changed by a majority vote at any annual business meeting of the Association.

2. Dues shall be collected from each member of the Association until he has made five annual payments.

VIII. AMENDMENTS

Any proposition to alter or amend these articles of association must be made at a regular meeting, and have the assent of two-thirds of the members present.

Officers for 1907-08

President:—James Francis Lanagan, '00.

Vice-Presidents:—Edith Wilcox Beasly, '92; Francis Valentine T. Lee, '01; Dudley Daniel Sales, '06.

Secretary-Treasurer:—Charles Frederick Wright, '96, A.M. '97.

Executive Committee:—Benjamin Palmer Oakford, '02, LL.B., '03, Chairman; Charles Frederick Wright, '96, A.M., '97; James Francis Lanagan, '00; William Albert Manning, A.M., '02, Ph.D., '04; Richard Watts Barrett, '04.

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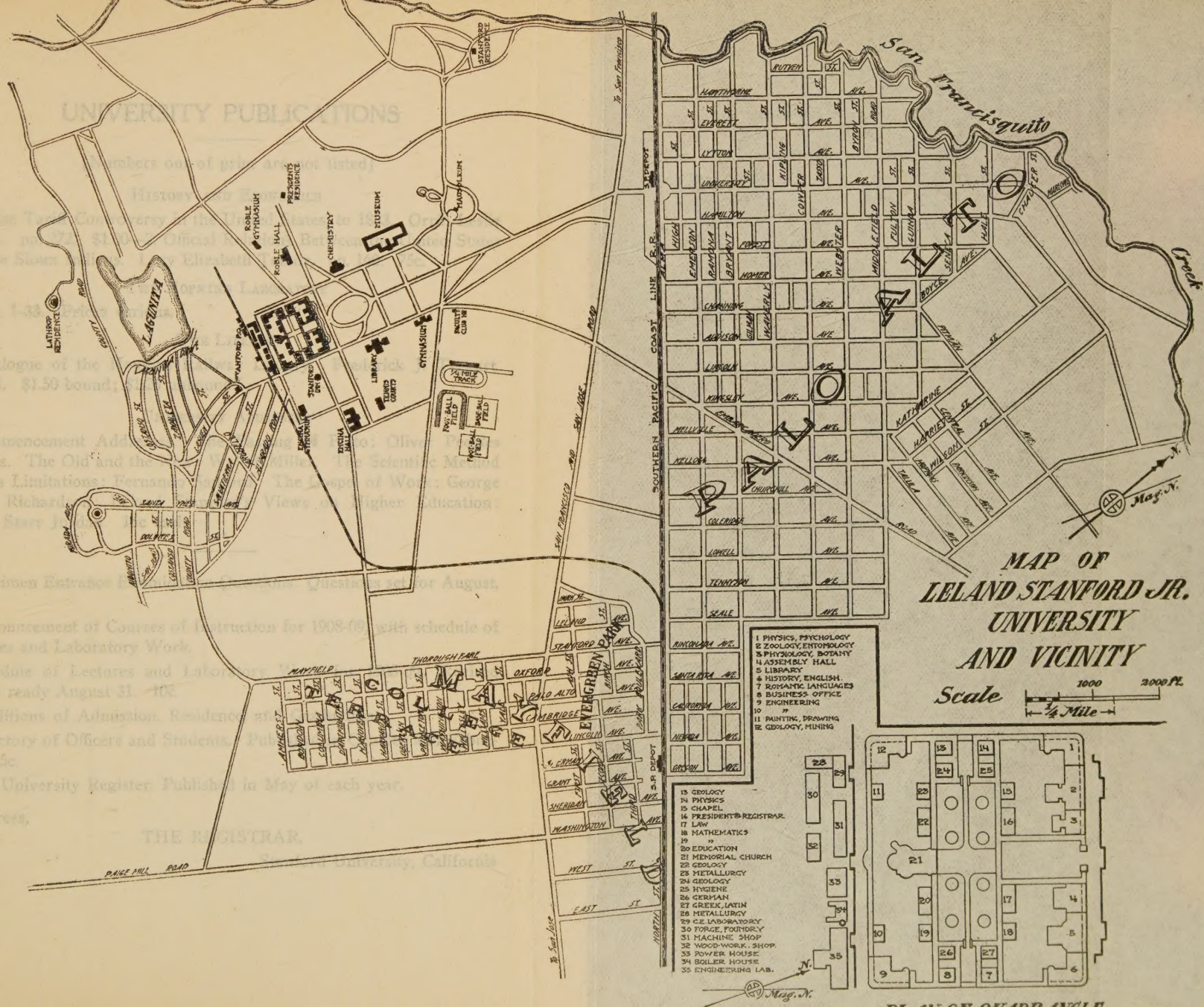
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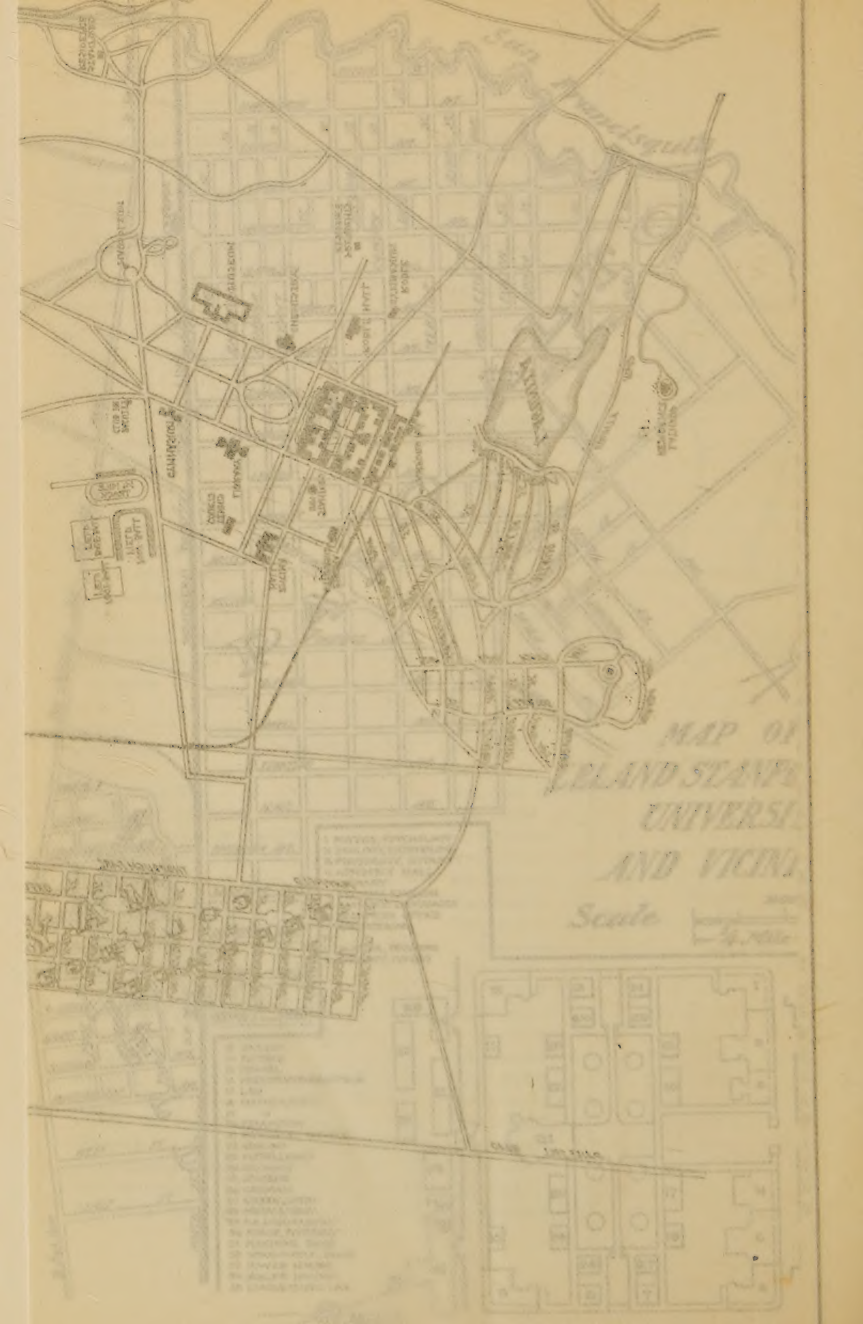
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The Hopkins Laroratory

Nos. 1-33. Prices various.

The Library

Catalogue of the Hopkins Railway Library. Frederick J. Teggart. pp. 231. $1.50 bound; $1.25 unbound.

University Addresses

Commencement Addresses. The Passing of Plato: Oliver Peebles Jenkins. The Old and the New: Walter Miller. The Scientific Method and Its Limitations: Fernando Sanford. The Gospel of Work: George Mann Richardson; Leland Stanford's Views on Higher Education: David Starr Jordan. 15c each.

Specimen Entrance Examination Questions. Questions set for August, 1907.

Announcement of Courses of Instruction for 1908-09, with schedule of Lectures and Laboratory Work.

Schedule of Lectures and Laboratory Work for 1908-09. Revised edition ready August 31. 10c.

Conditions of Admission, Residence, and Graduation.

Directory of Officers and Students. Published in October and February. 15c.

The University Register. Published in May of each year.

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